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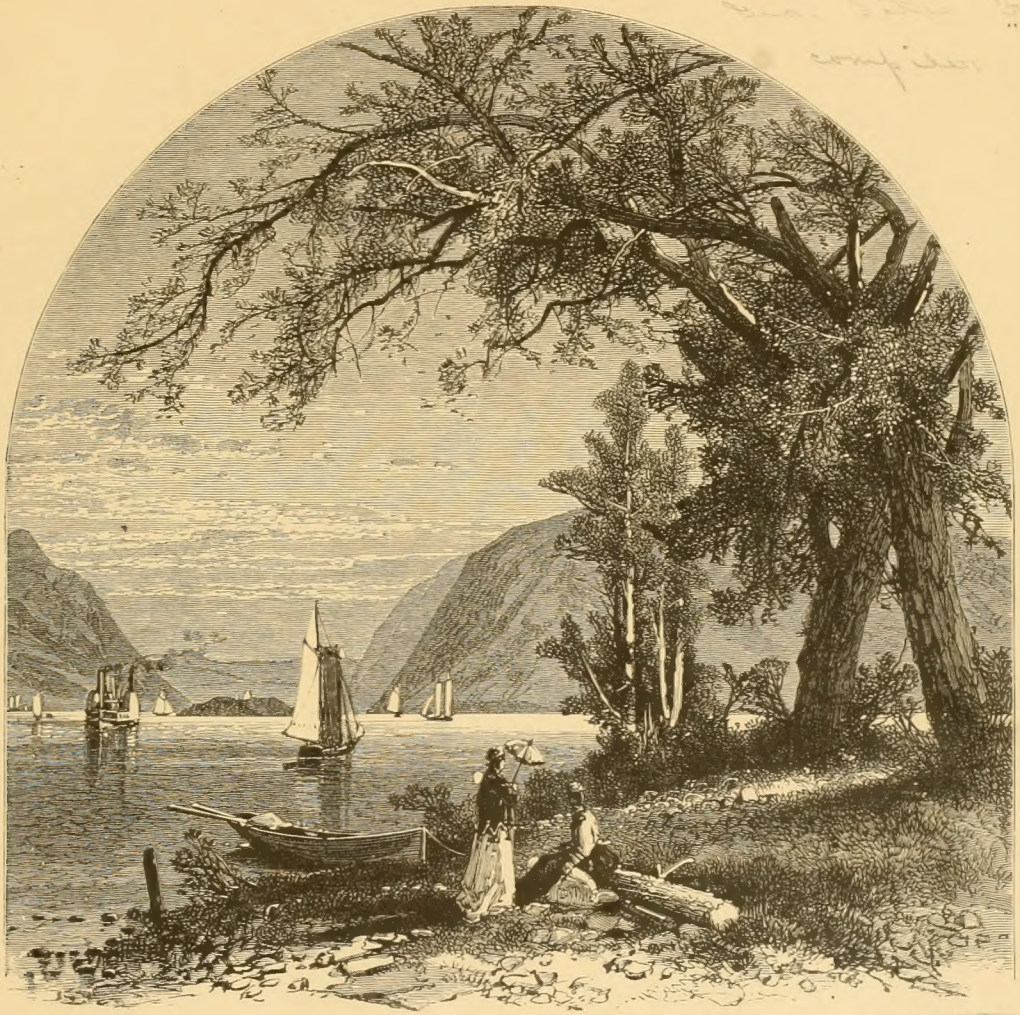
OUR NATIVE LAND:

OR,

GLANCES AT AMERICAN SCENERY AND PLACES,

WITH

SKETCHES OF LIFE AND ADVENTURE.



WITH THREE HUNDRED AND THIRTY-SIX ILLUSTRATIONS.

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PREFACE.

THE striking features of American scenery, society, industry, and social life have more and more stamped themselves on the interest of the world during the last half-century. For many years this curiosity on the part of intelligent Europeans was retarded by a reluctance to accept the phases of civilization in the New World at their full worth. Discussion of the great empire which had grown up on the Western Continent was pointed with a sneer at what was rude and crass in our social forms and the ferment of a political life, the bottom impulse of which was at odds with those that vitalized methods, habits, and beliefs in Europe.

Since our late civil war, foreign opinion has shaped itself into a new and more serious attitude. The great influx of travel has crowded every nook and corner of our country with keen and competent observers, whose reports have been for the most part fair and just in intention, and comprehensive in treatment. The feeble snarl has been lost in big notes of amazement and pleasure at the wonders scattered profusely by the hand of Nature, and the no lesser marvels wrought by the energy of man. The possession of a standard of comparison, too, has had its use in giving foreign books on America something of the vivid and picturesque not easily attainable otherwise.

A common reproach addressed to intelligent Americans abroad is, that they have seen so little of their own country, their critics forgetting that the country is so vast in extent that some of its most wonderful scenery is difficult of access. Foreigners coming to America as tourists, on the other hand, with the express purpose of making themselves acquainted with the striking aspects of life and nature which it furnishes, travel with a distinct end in view, while the journeys of the American in his own country are naturally limited for the most part by the exigencies of business or the bounds of a short summer-tour for himself and family. It is the purpose of the present volume to bring together intelligent and animated descriptions of the more picturesque and sublime phases of scenery in our great country, interspersed with episodes of travel and adventure, and glances at some of the great industries which present aspects interesting to the imagination as well as to the sense of utility. No attempt has been made to follow any consecutive order in the narrative. So the reader may fancy himself on the magical carpet celebrated in the "Arabian Nights," which whisked the traveler from place to place and from scene to scene with the swiftness and caprice of fancy itself.

CONTENTS.

PAGE

THE CAÑONS OF THE COLORADO 3

Major Powell's expedition down the Colorado River in boats—Sketch of the perils and results of his previous journey in 1871–'72—The cañons of the Green River, one of the sources of the Colorado—The Colorado proper and its stupendous walls—Marble Cañon—The wonders of Grand Cañon—A river with walls nearly seven thousand feet high—Interesting Indian tribes, the Moquis Pueblos, the dying remains of a lost civilization.

THE HUDSON RIVER 31

Characteristic features of river scenery—The Palisades—Tarrytown, its traditions and associations—The home of Washington Irving—The Highlands—The legendary interest of the region—West Point, our great military school—How the cadets live and study—The charms of West Point and its surroundings—The scene of Drake's "Culprit Fay"—The story of the poem, and how it was suggested—The literary associations of the region about Cornwall—Idlewild, the home of N. P. Willis—Newburg and its surroundings—The Catskills, and their charm as a summer resort—The upper Hudson—A river celebrated throughout the world for its beauty.

SCENERY OF THE PACIFIC RAILWAYS.—PART I. OMAHA TO OGDEN 64

The noblest scenery of the West adjacent the great transcontinental lines—A bird's-eye view of some of the greatest natural wonders of the world—The former sufferings of emigrants over a long and dreary trail—The present luxury of travel over the same route—Omaha, the eastern terminus of the Union Pacific—The first glimpse of the Western Plains—Cheyenne and its surroundings—A typical Western town in its growth—The Black Hills—The Great Laramie Plains—Twilight in the desert—Incidents of railway-travel—The great dividing ridge of the continent—The wonderful color and shapes of the rocks—The marvels of Red Cañon—Green River—The Uintah Mountains—Gilbert's Peak—Hayden's Cathedral—The wonderful church—Buttes of Wyoming—The borders of Utah—Utah the home of much of the noblest Western scenery—A desert turned into a garden by irrigation—Early Mormon life—Echo Cañon and its great precipices—Weber Cañon—Lofty walls of rock painted by Nature in the richest colors and carved in every variety of shape—All this region once a grand internal ocean—The Thousand-Mile Tree and the Devil's Slide—The Devil's Gate and Ogden Cañon.

SCENERY OF THE PACIFIC RAILWAYS.—PART II. OGDEN TO SAN FRANCISCO . . . 96

Ogden and its strange types of life—Salt Lake City—The Great Salt Lake—The junction of the Central and the Union Pacific roads—Nevada, the desert State—The Sierra Nevadas—The valley of the Truckee River—Lake Tahoe—Virginia City—Donner Lake and its tradition—The western slope of the Sierras—The great snow-sheds—Blue Cañon and Giant Gap—Water as a means of mining—Cape Horn—The Sacramento Valley—Sacramento and San Francisco.

A GLIMPSE OF THE FAR NORTHWEST 125

Characteristics of scenery in Washington Territory—Luxuriant primitive beauty and wildness—Strange mixture of civilization and barbarism—The principal towns of the Territory—Early traditions and history—Forests, lakes, and mountains—The future of Washington Territory—Characteristics of the water-falls of the far Northwest—Cascades and cataracts in Oregon—Snoqualmie Falls, Washington Territory—Shoshone Falls, Idaho—Sioux River Falls—Falls of the Missouri.

PAGE

THE YELLOWSTONE VALLEY 148

A wonderland of the West—Interesting traditions and adventures—The journey into the valley—Mammoth Hot Springs and Mud Springs—The Mud-Volcano—The Falls and Grand Cañon—Wonders of the Fire-Hole River—The Lower Geyser Basin—The great attraction of the Yellowstone Park—The geysers of the Upper Basin—The Giant and Giantess—Theory of geyser eruptions—The Yellowstone Lake.

SKETCHES OF INDIAN LIFE 179

The red-man of the plains—The Indian dandy at the trading-post—How the post-trader treats the savage—Condition and traits of Indian women—An Indian carnival—Religion and customs—Funerals, and the Indian reverence for the dead—Love-making—The Indian as a hunter—Methods of pursuing the elk—Buffalo and moose hunting—Getting salmon on the Columbia River—The craft and skill of the red-man.

SCENES IN NEVADA AND OREGON 203

Features of Nevada scenery—The Sierras and their forests—Characteristics of the mountains—Valley of the Truckee River—The Sierras of Nevada—The desolation of the plains—Humboldt Mountains—The beauty and fertility of Oregon—A voyage up the Columbia River—Castle Rock and Cape Horn—The Cascades and Dalles City—Salmon Falls.

SUMMER HAUNTS BY THE SEA 225

Striking characteristics of the upper New England coast—The cliffs of Grand Manan—Mount Desert and its remarkable fascinations—Sea-shore, forest, mountains, and lakes happily united—The Eastern Shore—From Portland to Portsmouth—The Isles of Shoals and their traditions—Quaint old historic towns—Nahant and Swampscott—Newport, the queen of American watering-places—Its former commercial glory and historic importance—The ocean scenery about Newport—Social life at Newport—Coney Island, the antipodes of Newport—A typical democratic watering-place.

OUR INLAND PLEASURE-PLACES 261

Among the Catskills—Saratoga and its life—Lake George and Lake Champlain—Lake Memphremagog—The White Mountains—Trenton Falls—The lakes of Central New York—Watkins Glen—Niagara Falls—The beauties of the Thousand Islands—The Saguenay River—Minor watering-places of the interior—Put-in-Bay—Lake Erie.

THE GREAT LAKES 295

Buffalo, the head of our inland seas—The historic interest of Lake Erie—Cleveland, Toledo, and Sandusky—Lake Huron—The Straits and Island of Mackinac—The western shore of Lake Michigan—Chicago and Milwaukee—The situation and grandeur of Lake Superior—The Pictured Rocks; the varied wonders of its shores—History and legend—The Hudson Bay Company—Mining on Lake Superior.

THE MOUNTAINS OF THE NORTH 325

Some characteristic scenes in the White Mountains—Mount Mansfield and the Green Mountains of Vermont—The Adirondack region of New York—Mountain, lake, forest, river, and water-falls, most picturesquely blended—The Catskills and their peculiarities—The Delaware Water-Gap—The Blue Ridge of Pennsylvania—The beauties of the Juniata region—Mauch Chunk, the most picturesque of mountain towns.

THE MOUNTAINS OF THE SOUTH 364

The mountains of Virginia—Harper's Ferry and its surroundings—The Peaks of Otter—North Carolina scenery—The highest mountain of the Atlantic coast—The Linville Range—Mount Pisgah—The French Broad and its beauties—Cherokee traditions—Alum Cave, Smoky Mountain—Cumberland Gap—Lookout Mountain, Tennessee—Mountain-scenery in Georgia—The valley of the Owassa—Tallulah Chasm.

THE LAND OF ORANGE-GROVES 398

The American Italy—Situation and climate—Jacksonville—A trip up the St. John's and the Ocklawaha—St. Augustine: its history and traditions—The St. Augustine of to-day—The gardens and fruits

PAGE

of Florida—The banana, and how it grows—The orange-culture—Florida vegetation—The "cracker" class—The principal points of interest in the State—Key West—Indian River—Hunting in Florida Lake Okechobee—The Everglades.

COLORADO 432

The mountains of Colorado—The city of Denver—Boulder Cañon—Mountain mining cities—Idaho Springs and Georgetown—The ascent of Gray's Peak—Monument Park and the Garden of the Gods—Colorado Springs and Pike's Peak—The natural parks and their characteristics.

THE YOSEMITE 461

Approaches to the Yosemite Valley—How it was discovered—The big trees of Mariposa—Descent into the valley by the Mariposa trail—The Bridal Veil Fall and Cathedral Rocks—Sentinel Rock and Dome—Yosemite Falls—The inhabitants of the valley—The gorge of the Merced—Tenaya Cañon—View from Cloud's Rest—Accommodation for visitors.

THE LOWLANDS OF THE SOUTH 477

South Carolina scenery—Early settlements of the State—Charleston—The rice-culture—Savannah—Characteristics of a lovely Southern city—The lowlands of Alabama—The forest-wilderness of Pascagoula—The mouth of the Mississippi—Romantic history of the Father of Waters—The Mississippi below New Orleans—The cypress-swamps—New Orleans, the "Queen of the South"—Sketches of life in New Orleans—Mississippi navigation—The magnolia-forests and Spanish moss—The sugar-plantations—Characteristic impressions of the lower Mississippi—Inundations and crevasses—The cotton industry.

THE OHIO AND UPPER MISSISSIPPI 515

The beginning of the Ohio at Pittsburg—Early history of the river—Characteristics of the river and its navigation—The interesting towns on its borders—Ohio and Kentucky—The early romance of Kentucky history—Cincinnati, the "Queen of the West"—The city of Louisville—The junction of the Ohio and Mississippi—St. Louis and its more astonishing features—The mineral wealth of Missouri—The upper Mississippi—Its peculiarities as distinguished from those of the lower river—Rock Island and Davenport—The beautiful scenery of the river—Quaint Dubuque—La Crosse—Features of river-navigation—Trempealeau and Lake Pepin—St. Paul and the State of Minnesota—Head-waters of the river.

THE METROPOLIS AND ITS EASTERN SISTERS 548

The situation and approaches of New York—Commercial and industrial greatness—Scenes in lower New York—Characteristics of Broadway—Social life in New York—The water-front—Central Park and its attractions—Boston and its early colonial history—Importance as a commercial and manufacturing center—Boston Common—Characteristics of the various portions of the city—Suburbs of Boston—The City of Brotherly Love—Its position among American capitals—Scenes and features of interest—The beauties of Fairmount Park—Baltimore and its situation—Principal features of the city—Its monuments and its pleasure-grounds—The political center of our country—Its foundation and beginnings—The national Capitol—The White House and other public buildings—Characteristics of Washington life.

OUR NATURAL RESOURCES 588

Extent and diversity of the United States—Its advantages of coast-line, rain-fall, and internal waterways—The great cereal crops, wheat, corn, etc.—Their annual product and value—Possibilities of the future—The cotton, rice, tobacco, and sugar States—Statistics of production—Our annual fruit-crops—The forests of the country—Present condition of the lumber industry—The enormous possibilities of the Pacific coast in lumber—Coal production in America—Our iron-mines—Coal and iron only in their infant development—The yield of the precious metals—How gold and silver are distributed—Our deposits of copper, lead, quicksilver, and the minor metals—Petroleum-oil and its distribution—Enormous value of our sea-fisheries—Importance of fish-culture—Mackerel, cod, shad, herring, salmon, etc.—The oyster-beds of American waters—Total value of our fisheries—Our resources capable of twenty-fold their present production.

APPENDIX: STATISTICS OF POPULATION AND AREA 607

I. Population of one hundred of the largest cities and towns in the United States. II. Census by States at each census, 1790–1880. III. Statistics of area in square miles.

INDEX OF PLACES 611

LIST OF ILLUSTRATIONS.

PAGE

THE CAÑONS OF THE COLORADO:

Echo Rock 3
Start from Green River Station 4
Horseshoe Cañon 7
Cañon of Lodore 9
Bonita Bend 10
Light-House Rock 11
Running the Rapids 13
Marble Cañon 15
Head of Grand Cañon 17
Grand Cañon, looking down 20
View in Grand Cañon 23
Grand Cañon, showing Amphitheatre and Sculptured Buttes 25
Street in a Moquis Village 27
Navajo Indians 29

THE HUDSON RIVER:

Day-Boat leaving New York 31
View of the Palisades from Eastern Shore 32
A Pinnacle of the Palisades 33
Palisade Mountain House 34
Yonkers 35
Sunnyside 36
Nyack 37
Tarrytown 38
Old Dutch Church, Sleepy Hollow 39
Old Bridge, Sleepy Hollow 41
Palisades above Nyack, with Distant View of Sing Sing 42
Croton Point 43
Stony Point and Haverstraw Bay 43
Entrance to the Highlands 44
Iona Island and Anthony's Nose 45
View from Fort Montgomery 46
Sugar-Loaf Mountain.—A Storm in the Highlands 47
Cozzens's Hotel and Buttermilk Falls, West Point 48
West Point 50
View at West Point, north from the Artillery-Grounds 51
West Point, from Fort Putnam 53
Cold Spring, from Constitution Island 54
Breakneck Mountain, from Little Stony Point 55
Under the Cliff of Cro' Nest 56
Cro' Nest and Storm-King from Cold Spring 57

PAGE

The Highlands, from Cornwall 58
The Highlands, south from Newburg 60
Catskill Mountains, from Tivoli 61
The Hudson at Glens Falls 62
Source of the Hudson 63

Scenery of the Pacific Railways:

The Union Pacific Depot at Omaha 65
The Platte River, near North Platte 68
Black Hills, near Sherman 69
Maiden's Slide, Dale Creek 70
Red Buttes, Laramie Plains 71
Emigrants' Camp, Laramie Plains 72
Elk Mountain 74
Banks of the Platte River 75
View on the Platte River 76
Giants' Butte, Green River 77
Cliffs, Green River 78
Uintah Mountains 80
Church Buttes, Wyoming 82
Bear River Valley 84
Echo Cañon, Utah 85
Castle Rock, Echo Cañon 86
Pulpit Rock, Echo Cañon 87
Hanging Rock, Echo Cañon 88
Weber Cañon 89
Devil's Slide, Weber Cañon 90
The Witches' Rocks, Weber Cañon 92
The Devil's Gate, Weber Cañon 93
Ogden Cañon 95
Ogden, and the Wahsatch Range 96
Salt Lake City, from the Wahsatch Range 97
Black Rock, Great Salt Lake 99
Bear River, Utah 101
Great Salt Lake, from Promontory Ridge 102
Indian Camp in the Great American Desert 102
Humboldt Wells and Ruby Mountains 103
Devil's Peak, Humboldt Palisades 104
Lake Tahoe 106
Donner Lake, from the Snow-Sheds 109
Donner Rock 110
Lake Angeline 111
Emigrants crossing the Sierras 112
Lower Cascade, Yuba River 113
Cedar Creek, Blue Cañon 114
Giant's Gap, American Cañon 115
Great American Cañon 116
Hydraulic Mining, Gold Run 117
Cape Horn 118
Lake Merritt, Oakland 120
San Francisco, from Goat Island 121
Central Pacific Wharf 122
The Cliffs, and Cliff House, San Francisco 122
Chinese Quarter, San Francisco 123

PAGE

A Glimpse of the Far Northwest:

New Tacoma, Mount Rainier in the Background 125
Olympia, on Puget Sound 127
Cascade Range, from Puget Sound 128
Scenery of Puget Sound 131
Snoqualmie Falls 133
Saw-Mill, Port Gamble 135
Rogue River Falls 136
Falls of the Willamette 138
Southern Side of Willamette Falls 139
Palouse Falls 140
Spokane Falls 142
Shoshone Falls, Snake River 145
Island Falls, Snake River 146

The Yellowstone Valley:

The Yellowstone River 148
Map of the Yellowstone National Park 149
Cliffs of the Yellowstone 151
Mammoth Hot Springs 154
Liberty Cap 156
Mud Springs 158
Grand Cañon of the Yellowstone 161
Upper Falls of the Yellowstone 162
Column Rocks 164
Lower Falls of the Yellowstone 165
Tower Falls 168
The Great Geyser Basin 169
The Giantess 171
The Giant Geyser 172
Yellowstone Lake 175
Hot-Spring Cone 177

Sketches of Indian Life:

Indian Dandy 180
Store of the Trading-Post 182
Women Water-Carriers 183
Indian Women Bathing 184
Frontier Fort 186
Indian Funeral 188
Indian Widow at her Husband's Grave 189
Indian Lovers 191
Hunting the Elk 193
Indians Elk-Hunting in Masquerade 194
Indians Buffalo-Hunting in Masquerade 195
Hunting the Buffalo on Foot 196
Catching Salmon in the Columbia River 197
Killing the Snow-bound Moose 199

Scenes in Nevada and Oregon:

Column Mountains, Nevada 203
Summits of the Sierras 206
Pyramid Lake, Nevada 208
Star Peak, Nevada 209
Lake in the Humboldt Range, Nevada 210

PAGE

Sculptured Cañon, Humboldt Range, Nevada 211
Granite Bluffs in Wright's Cañon, Humboldt Range, Nevada 213
Castle Rock 215
The Cascades 216
Mount Hood 218
Salmon Falls 219
Corvallis 222
Yaquina Bay 224

SUMMER HAUNTS BY THE SEA :

Grand Manan 226
Castle Head, Mount Desert 228
Cliffs at Mount Desert 230
The "Spouting Horn" in a Storm 233
Cliffs, Portland Harbor 234
Isles of Shoals 235
A Picnic at the Isles of Shoals 237
Caswell's Peak, Star Island 239
Bass Rocks, Gloucester 240
Cedar-Tree at Cape Ann 242
Marblehead 243
Pulpit Rock, Nahant 245
Cottage and Shore at Nahant 246
Old Fort Dumpling, Newport 247
Scenes at Newport 248
The Drive 250
The Walk on the Cliff 251
A Newport Cottage 253
Narragansett Pier 254
Scenes at Coney Island 257
Scenes at Coney Island 258
The Drive at Long Branch 260

OUR INLAND PLEASURE-PLACES :

Catskill Mountain-House 261
View of the Catskills 263
Scenes at Saratoga 264
Scenes at Lake George 267
Lake George, from Glens Falls Road 268
Lake Champlain, from Fort Ticonderoga 270
Split Rock, Lake Champlain 271
Lake Memphremagog 273
Mount Washington, White Mountains 274
Trenton Falls 277
A Nook near the Foot of Lake Canandaigua 280
Entrance to Watkins Glen 281
Glen Cathedral 282
Horseshoe Falls, Niagara 284
Rapids above the American Fall 285
Cave of the Winds, Niagara 287
Among the Thousand Islands 289
Point Crepe, Saguenay River 291
Put-in-Bay, Lake Erie 292
Kelly's Island, Lake Erie 294

PAGE

THE GREAT LAKES :

Light-House, Buffalo 295
Ship-Canal, Buffalo 297
Mouth of Cuyahoga River, Cleveland 299
Lake Erie, from Bluff, Mouth of Rocky River 300
Perry's Lookout, Gibraltar Island 304
Detroit River, from Fort Wayne (below the City) 306
Scene on the Shore of Mackinac 309
Lover's Leap 312
Mouth of the Chicago River 314
Shore of Lake Michigan 317
Sail-Rock, Lake Superior 319
Grand Portal, Lake Superior 320
Island No. 1, Lake Superior 323

THE MOUNTAINS OF THE NORTH :

White Mountains, from the Conway Meadows 325
Gate of the Crawford Notch 327
Profile Mountain 329
The Flume 330
Mount Kearsarge 333
Monadnock Mountain, from North Peterboro 334
Confluence of Saco and Swift Rivers, Conway 337
East Mountain, from Robbe's Hill, Peterboro 338
Glimpse of Lake Champlain, from Mount Mansfield 340
The Adirondack Woods 343
The Ausable Chasm 344
Gothic Mountain, from Ausable Lake 346
The Adirondacks, from Placid Lake 348
A Carry near Little Tupper Lake 349
Catterskill Falls 351
Sunset Rock, Catskill Mountains 353
Delaware Water-Gap 355
View from Horseshoe Curve, Kittanning Point (Early Morning) 358
In the Pack-saddle, on the Conemaugh 361

THE MOUNTAINS OF THE SOUTH :

Harper's Ferry 364
Loudon Mountain and the Shenandoah 366
Peaks of Otter 369
Lookout Point 371
Linville River 373
Linville Pinnacle 374
Mount Pisgah 377
The French Broad 379
Cliffs on the French Broad 381
Hawk's-Bill Mountain 383
Alum Cave, Smoky Mountain 387
Cumberland Gap, from Eagle Cliff 390
View from Lookout Mountain 393
View on the Owassa 394
Tallulah Chasm, Georgia 396

PAGE

THE LAND OF ORANGE-GROVES :

St. John's River, Florida 398
Night Scene on the Ocklawaha River 401
A Florida Swamp 403
A Scene on the Ocklawaha River 404
View on the Upper St. John's 407
The City Gate, St. Augustine 409
Watch-Tower, St. Mark's Castle 411
A Street in St. Augustine 413
A Florida Garden 414
The Date-Palm 416
Growth of the Banana-Leaf and of the Fruit 418
A Florida Orange-Grove 420
A Palmetto-Grove 421
Florida Pine-Barrens 423
Light-House on Florida Keys 424
Indian River 425
A Hunter's Camp 427
Lake Okeechobee 428
An Island in the Lake 430

COLORADO :

A Glimpse of the Rocky Mountains 432
Glen Doe 434
Long's Peak 435
Mouth of South Boulder Cañon 437
Boulder River 438
The Falls, North Boulder Cañon 439
Dome Rock, Middle Boulder Cañon 440
Idaho Springs 442
Georgetown 443
Clear Creek, below Georgetown 444
Green Lake 445
Gray's Peak 447
Snake River 448
Clear Creek Cañon 449
Pike's Peak 450
Monument Park 452
Tower of Babel, Garden of the Gods 453
Major Domo, Glen Eyrie 454
William's Cañon 456
Rainbow Falls, Ute Pass 458
The Snow-clad Peaks of the Rocky Mountains 460

THE YOSEMITE :

Half Dome, from the Merced River 461
Descent into the Valley 463
Yosemite, from Mariposa Trail 465
Valley Floor, with View of Cathedral Spires 467
Sentinel Rock and Fall 469
The Yosemite Falls 471
Gorge of the Merced 473
General View of Yosemite, from Summit of Cloud's Rest 475

PAGE

THE LOWLANDS OF THE SOUTH :

A Live-Oak on the Ashley 477
Glimpse of Charleston and Bay 479
Ashley River 481
Unloading Rice-Barges 483
On the Savannah River 485
A Savannah Street-Scene 486
A Home on the Pascagoula 490
At the Mouth of the Mississippi 492
A Cypress Swamp 494
New Orleans, from the River 496
A Magnolia Swamp 501
Gathering Spanish Moss 503
Cutting the Sugar-Cane 504
A Mississippi Bayou 507
A "Crevasse" on the Mississippi River 508
Gathering Cotton 512
A Planter's House on the Mississippi 514

THE OHIO AND UPPER MISSISSIPPI :

The Ohio River, below Pittsburg 515
The Ohio River, from Marietta 519
Vineyards on the Hill-sides 521
Cincinnati 522
View on the Rhine, Cincinnati 524
Louisville, from the Blind Asylum 527
The Upper Mississippi, near St. Louis 529
St. Louis 531
Eagle Bluff, near Dubuque 535
At the Mouth of the Wisconsin 538
Scenery above La Crosse 540
Approach to Trempealeau 541
Lake Pepin 543
Near St. Paul 544
Falls of Minnehaha 546

THE METROPOLIS AND ITS EASTERN SISTERS :

New York, from Fort Wadsworth, Staten Island 548
View of New York from the Bay 550
Broadway, south from the Post-Office 553
Scene on Fifth Avenue 555
View of the Bay from the Battery 557
The Mall, Central Park 561
The Obelisk, Central Park 564
View of Boston from the Harbor 566
Public Garden, Boston 568
Boston, from Mount Bowdoin 570
Chestnut Street Bridge, on the Schuylkill 572
Tower, Independence Hall, Philadelphia 574
Fairmount Water-Works 576
View on the Schuylkill 577
Washington Monument, Baltimore 579

PAGE

Baltimore, from the East 581
The Capitol at Washington 583
The White House 585
Treasury Department 586
War and Navy Building 587

OUR NATIVE LAND.

THE CAÑONS OF THE COLORADO.

Major Powell's expedition down the Colorado River in boats. Sketch of the perils and results of his previous journey in 1871–'72—The cañons of the Green River, one of the sources of the Colorado—The Colorado proper and its stupendous walls. Marble Cañon—The wonders of Grand Cañon—A river with walls nearly seven thousand feet high—Interesting Indian tribes, the Moquis Pueblos, the dying remains of a lost civilization.



Echo Rock.

NATURE has strewed over the North American Continent her boldest masterpieces of beauty and sublimity, but nowhere has she wrought more wonderful works than in the cañons of the Colorado River. The walls of these cañons are for more than a thousand miles, where they rear themselves in perpendicular cliffs, never less than a thousand feet high. The Grand Cañon is, for a distance of two hundred miles, at no point less than four thousand feet deep. This the adventurous explorer, Major Powell, calls "the most profound chasm known on the face of the globe." In the years 1540–'42 expeditions sent out from Mexico reported, on their return, the discovery of a "river with banks nine miles deep, and so steep that the water-level could not be reached." Two hundred and thirty-four years later (1776), Padre Escalante, a Spanish priest, with about one hundred followers, was the first to look upon the Grand Cañon at the point now known as the "Old Ute Crossing," but named originally by Escalante "Vado del Padre," or "Priest's Ford." Escalante's graphic description is as follows: "A rock, when lying in the river and seen from the cliff, appeared no larger than a man's hand; but, when the descent of more than a mile vertical had been made to the water-level, it was found to be as large as the cathedral at Seville." The map constructed by the *padre* still shows clearly the point at which he crossed.

Fremont and Whipple had seen the cañon, and Ives, in his expedition of 1857–'58, saw the Kanab, one of its largest branches; but it was not till Major Powell's voyage of exploration, in 1869, that the river, hitherto practically almost as unknown as the sources of the Nile, was revealed in all its wonders to the world. The same intrepid explorer made a second expedition, under the auspices of the Government, in 1871, and added fresh material for wonder to the results of his earlier voyage. In no



Start from Green-River Station.

way can the marvels of the Colorado River be more vividly presented than by following the adventurous exploits of the last Powell expedition.

The Colorado River is formed by the junction of the Green and Grand Rivers, in the eastern part of Utah, from which it flows southward into the Gulf of California. From Green River Station, which is the point of departure, the distance by the course of the stream to the junction of the rivers is a little more than four hundred and eighty-eight miles. The cañons begin very soon after leaving the railway, and increase

in grandeur till they reach their climax in the Grand Cañon of the Colorado River. The juncture of the two rivers pours into the mighty gorges of the Colorado a flood of waters equal in volume to the flow of Niagara. The cañons on Green River, before it unites with the waters of the Grand, are known successively as Horseshoe, Flaming Gorge, Kingfisher, Red, Lodore, Whirlpool, Yampa, Desolation, Gray, Labyrinth, and Stillwater. Those on the Colorado proper are Cataract, Narrow, Glen, Marble, Grand, and Kanab Cañons.

The Powell expedition, whose journey we are about to retrace, explored a water-route of about four hundred miles on the Green River and nearly five hundred miles on the Colorado. The journey was made in boats, each containing three water-tight compartments, in which were packed provisions, instruments, extra clothing, etc., and the party consisted of eleven persons. They started from Green River City on May 22, 1871, and the swift current of the Green River, gliding at the rate of ten miles an hour, soon hurried them from friendly sight onward toward unknown perils.

The first fifty miles ran through an undulating sage-brush country, whose only advantage was found in the abundance of game, deer, antelope, otter, and beaver offering themselves at every turn to the hunter's rifle. Until the arrival at Flaming Gorge, there were no cañons, but at this point massive cliffs began to show themselves, heralding those stupendous gorges which were later to amaze the eye and imagination with a vertical ascent of nearly a mile and a half. Seven days after starting, the party reached Horseshoe Cañon without any accident more than the upsetting of one of the boats, and the penalty of wet jackets for the crew. At Horseshoe Cañon the scenery begins to approach the sublime. The walls, composed of beautiful red and yellow sandstone, rise vertically to the height of nearly two thousand feet. Six miles' journey through the Horseshoe, during which time there were many upsets and impromptu baths in the swift rapids, landed the party in a charming little valley appropriately called "The Hunter's Paradise." Rich green turf, countless beautiful flowers, deliciously cool springs embowered in deep groves of box-elder and cotton-wood, herds of deer, antelope, and mountain-sheep roaming in fearless innocence, made a graceful and fascinating picture. After spending two days in this Elysium, our travelers embarked again, and soon entered Red Cañon, so called from the brilliant vermilion hue of its walls. Here the perils of the journey began in dead earnest. Let us take a leaf from the diary of one of the party, which gives one a vivid idea of their experiences:

"To-day our hard work and lively times commenced. Pulled out into the stream at 7 A. M. Ran four very bad rapids in going one mile, then landed to bail out the boats, which were nearly full of water. After making everything secure again, started out, and soon came to a sudden bend in the river. The water, having worn a passage far under the rocks, sucked everything into it like a whirlpool. In passing the corner, the Nellie Powell was drawn under by this mighty current-force and capsized. The crew narrowly escaped drowning, but managed to reach the shore without great damage, and soon had the boat in trim for another trial.

"The Emma Dean also struck a wall and carried away a rowlock, but the Canonita rounded the turn successfully, and her crew came out flapping their wings like young roosters. One mile farther on we passed four fearful rapids, through which the boats plunged at a terrific rate, each nearly filling with water. The walls of rock are closing in as if to immerse us in a monster tomb, and a certain terror fastens on a man's vitals as the grim shadows deepen, yet life itself seems not to fascinate so much as that unknown water-track beckoning us on.

"Camped at 11 A. M. for dinner amid the most awful solitude one can imagine, the walls of the cañon rising on either side to the height of two thousand feet. Pulled out again at 2 P. M.; found the river very rough; ran one mile, shipping large quantities of water, and came to the first rapid that had as yet successfully disputed our passage. Here we made our first portage, unloaded the Emma Dean, and carried the things over the rocks on our shoulders, letting the boat down with ropes.

"The other boats made the passage in the same way, but without unloading their cargoes. All hands, wet, cold, and hungry, camped on the same spot that the party of 1869 did just two years ago to-day.* The current of the river is very swift here, running twenty miles an hour. Remained in this camp two days for the purpose of taking topographical observations of the rivers and mountains and obtaining views, and pitched our next camp on what we christened Ant Island, from the myriads of these industrious little insects that infested it, and which overran us and our food with surprising alacrity. At this point we passed an old boat with quite a little history of its own. It was left here in 1869 by a party of Green River miners on their way to Brown's Hole. This company started several weeks after the Powell party of the same year; but, not using the same care and precaution, they were wrecked near this island, and lost one of their number by drowning; and so, satisfied with the beauties of navigation, they abandoned their boat, took to the mountains, and arrived at their destination after three weeks of laborious toiling and climbing, having made a distance of fifteen miles, which we accomplished in less than two days. I mention the above incident not only from its own interest, but as showing the perils of such river navigation."

Again we read: "The day has been full of excitement, not unaccompanied by imminent danger, for we have run twenty fearful rapids in coming six miles. Imagination can not create an enjoyment so full of nervous dread and daring as the dash through these rapids at the rate of thirty miles an hour. One gets so to love the rush and roar that to effect landings between, to bail and make ready the boats, is an unwelcome delay, though the physical man be on the verge of exhaustion."

Before entering on the greater dangers of the cañons, the Powell party spent a couple of days for rest and preparation at the head of a pretty park-like valley called Little Brown's Hole, so called from an old trapper who had once lived the life of an anchorite at this spot. Fragrant mountain roses and luxuriant grass carpeted the earth, and made a delightful contrast to the savage grandeur of towering walls

* Referring to Major Powell's first expedition, two years before.



Horseshoe Cañon.

through which they had passed, and which they were to witness in still more startling forms of Nature's handiwork. The river flows onward from this spot for about thirty-five miles through this charming Eden set in the mountains, full of lovely

scenery, that rests and soothes the eye and fancy. Groves of cotton-wood alternate with sweeps of meadow, and everywhere are seen grass and flowers. Two miles back on either side the mountains tower four thousand feet toward the clouds, their snow-capped summits glistening in the sun like burnished silver, and contrasting beautifully with the vegetation and colored rocks at their base. This lovely valley, surrounded by high and almost inaccessible mountains, is hardly known even to the hunter, so difficult of access is it except by boat.

After emerging from the open, sunny valley into the gloomy shadows of the great walls, a few hours' time brings our party of tired voyagers to the head of the far-famed Cañon of Lodore, appropriately named from Southey's poem, "How do the Waters come down at Lodore?" This cañon is very narrow at its entrance, being only one hundred and fifty yards wide. The walls, rising perpendicularly to the height of two thousand feet, consist of brilliant-red sandstone, mottled and rainbow-tinted. When descending, the explorer finds the river falling one hundred feet to the mile, and the walls rising higher and higher, till, five miles farther down, at the head of Disaster Falls, they reach the height of three thousand feet. Thus, shut in by stupendous walls, our party haul their boats in close to the beetling rocks to spend the night, and get rested for the perilous passage of the rapids on the morrow. It was here that Major Powell lost a boat and her crew, and narrowly escaped drowning himself, in 1869. At Disaster Falls a party of daring trappers, in 1850, ignorant of what was before them, dashed heedlessly ahead, and were carried over the cataract, losing nearly all their party. The survivors, one of whom was Jim Bridger, Kit Carson's companion, clambered up the rocks, and sustained life for three weeks on berries, lizards, and snakes, in the attempt to extricate themselves, which they finally accomplished after desperate climbing and crawling along the face of the terrible crags.

Disaster Falls consists of two steep descents, fifteen feet each in height, and about fifty yards apart, below which, for several miles, the river presents a continuous sheet of boiling foam. It was deemed best to surmount this obstacle by a carry, which took two days, the boats being let down by ropes. Two more carries were necessary, at Triplet and Bowlder Falls, several miles below, and so the whole passage of Lodore Cañon was accomplished by eight days of hard labor, the distance being thirty miles.

Echo Park, where the Powell party remained for a week, takes its name from the wonderful echo there. At first, total silence follows the discharge of a gun; then suddenly the echo is heard far away, and it is swiftly repeated in rapid reverberations as if leaping from glen to glen, growing louder and louder till it culminates in a thunderous crash of sound. The park is a valley about a mile square, surrounded by walls twelve hundred feet high, and only accessible by water. From this point to Whirlpool Cañon, only a few miles, the river makes a rapid descent of thirty feet to the mile, and forms a varying picture of rapid current, rocky bowlders, fathomless pools, and milk-white foam. In the heart of the Whirlpool Cañon is a beautiful little group of islands covered with cotton-wood, on both sides of which the rock-walls rise straight three thousand feet in the air. The fanciful shapes of these dainty islets,

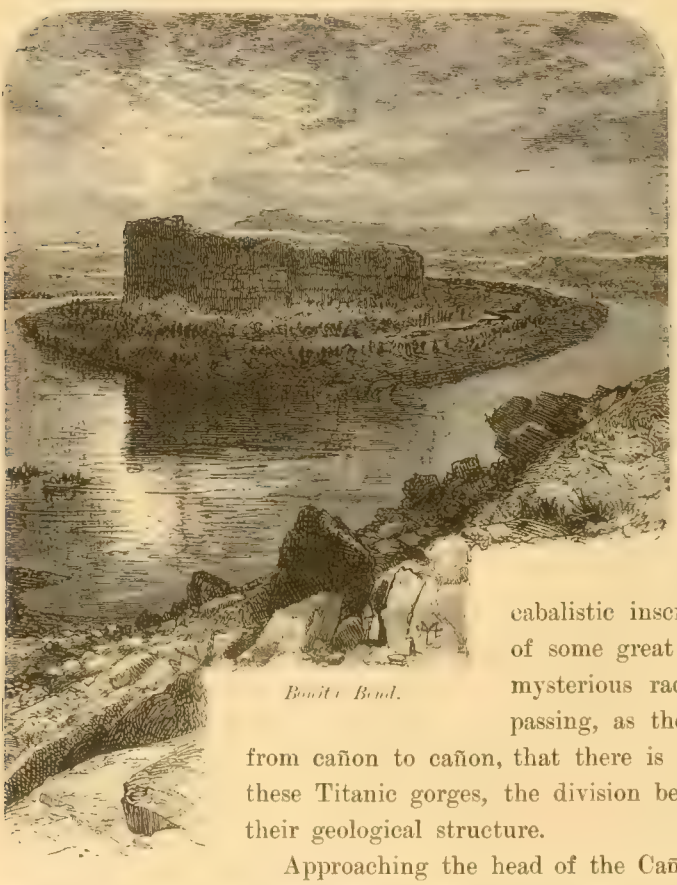
buried amid such weird and solemn surroundings, give them an aspect of something uncanny. The most distinct of the optic resemblances they present is that of a schooner under full sail, but the eye finds as many likenesses in them as in the glow-



Cañon of Lodore.

ing coals of a Christmas fire. On the eastern side the shore is rich with shrubbery, where the cañon temporarily breaks, and the effect of sunshine and shadow on the water is described as being very beautiful.

Yampa, also known as Split-Mountain Cañon, is a gorge from two thousand eight hundred to three thousand five hundred feet in height, where the river has cut its way into a mountain running parallel with it for six miles. From the summit of the mountain a bird's-eye view of the whole length of the cañon is obtained, stretching like a silver ribbon far into the valley of the Uintah Mountains, while on the west are seen the snow-capped peaks of the Uintah range and the valleys of Utah. The photographers of the party climbed to the summit for the purpose of taking observations, and, overlooking the giant gorge, saw far down its mighty depths, when the boats, though two miles down the river, seemed almost under the feet of the observer, and the voice of Major Powell giving orders came up as clear as the notes of a bugle. Near the mouth of this cañon were found carved on the overhanging rocks picture-writings of the ancient Aztecs, whose primitive seat is supposed to have been somewhere in this region, representing deer, buffalo, bear, elk, and different kinds of birds, accompanied with cabalistic inscriptions, the record, perhaps, of some great event in the history of that mysterious race. It may be remarked in passing, as the reader sails with our party from cañon to cañon, that there is rarely a break in the walls of these Titanic gorges, the division being marked by differences in their geological structure.



Beattie Bond.

Approaching the head of the Cañon of Desolation, the country gradually rises along the lateral river-bottoms until it reaches a flat surface. The cañon is appropriately named, for from its top as far as the eye can reach nothing is visible but a desert of sand and rock, interspersed with a few stunted cotton-wood trees and clumps of sage-brush. Our party passed the first fifteen miles of the gorge without a rapid, but soon the water became shallow and dangerous, and several accidents of upsets occurred. The walls are from eight hundred to three thousand feet high, generally sloping backward, and the country level, except where a lateral gulch runs toward the river. The lower part of Desolation is known as Cole's Cañon, and altogether the length is about one hundred miles. To pass this cañon it was neces-

sary to run one hundred and twenty rapids, and the bold *voyageurs* had many narrow escapes from drowning, and were never without wet jackets. On clearing this fatiguing and dangerous passage, Powell and his men camped at Gunnison's Crossing, so called from a Captain Gunnison who in 1854 was killed hereabout by the Ute Indians while leading an exploring party. Before his tragic fate, it was known as Old Spanish Crossing, being on the direct trail from Santa Fé to Los Angeles.

Labyrinth Cañon, one of the lower gorges of the Green River, has comparatively low walls, but they are perpendicular and impassable. Indeed, from Gunnison's Crossing, one hundred and sixteen miles above the junction of the Green and Grand Rivers, to the running out of the Grand Cañon, a distance of five hundred and eighty-seven miles, there are only two places, and these but a mile apart, where the river and its imprisoning gorges can be crossed. At one point in the Labyrinth Cañon the river makes a long bend, in the bow of which it sweeps around a huge circular *butte*, whose regular and towering walls look as though they might have been laid by a race of giant craftsmen. At a distance the pile looks like a vast turret-shaped fortress ruined and deserted. This point in the river is known as Bonita Bend. Adjoining this is Stillwater Cañon, which is, as the name indicates, smooth and placid, undisturbed by fall or rapid.



Light-House Rock in Cañon of Desolation.

Near this spot Major Powell found the ruins of an ancient Aztec city, deserted perhaps ten centuries ago. The history of this people, so far as we know it, is of singular interest. They were once a powerful nation, making and giving laws, peaceable, and inclined to agriculture. They were finally attacked by the nomadic tribes of the North, and such as survived were driven from their homes on the plains and

forced to seek shelter in the mountain fastnesses of the rocks and river-cañons. Many wild legends are told of their struggles with the fierce red-man, before they succumbed —how, besieged in their natural fortifications, they were finally reduced to a few hundreds, who now occupy seven small towns, built on high rocks, in Arizona. This residue is industrious, cultivating the soil, raising flocks of sheep, and making pottery of no inconsiderable artistic beauty. Major Powell found many of their houses perched on ledges of rock several hundred feet up the cañon-walls. These houses are built of rocks filled in with mortar, and generally contain two or three rooms. The walls are covered with beautifully painted inscriptions, in many cases representing natural objects with not only correctness but grace of outline, and showing a notable degree of artistic taste. Previous migrations of the race are supposed to have passed southward into Central America and Mexico, over which latter country it finally became dominant.

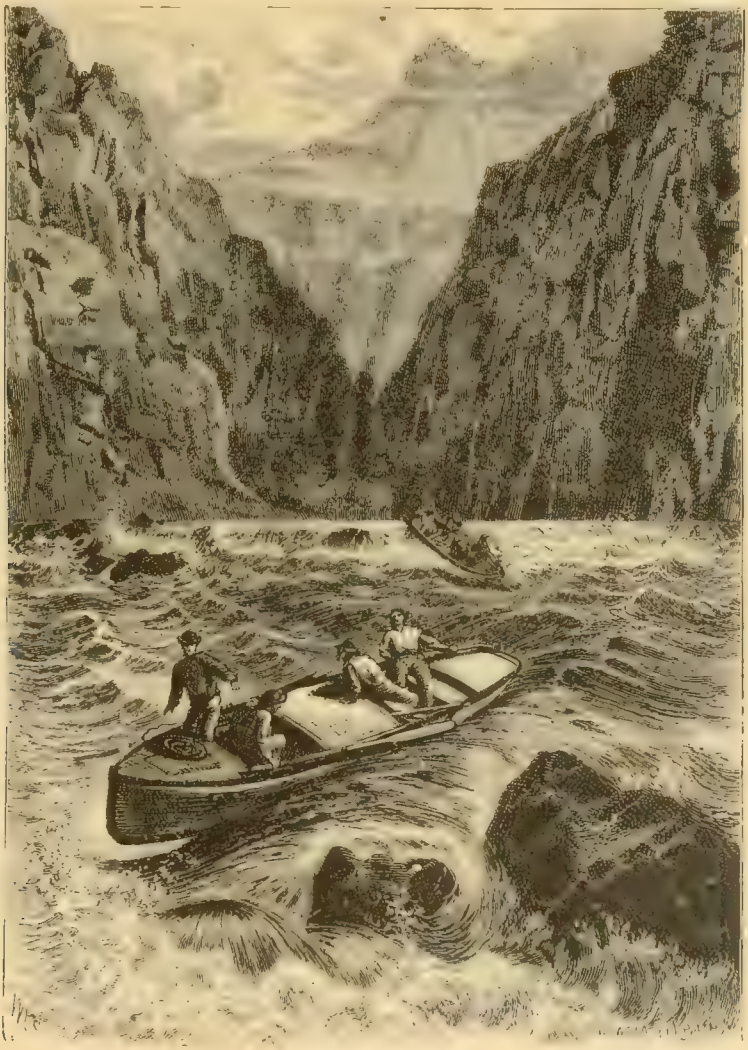
Little more than four months after starting, the Powell party arrived at the confluence of the two streams which constitute the now famous Colorado River. Let us borrow the description of the river at this initial point given by one of the explorers:

"It is at its source three hundred feet wide and very deep. The cañons rise sixteen hundred feet on either side, the view from the top being very extensive and novel. As far as the eye can reach, a smooth, flat rock spreads out in every direction in unbroken monotony, save when and where a *butte* or pinnacle looks up like some stern guardian of the stony waste. Many of these pinnacles are from three hundred to one thousand feet high, composed of the most exquisite party-colored sandstone, and cut and washed by the sand-storms into the most grotesque and fantastic forms. On some portions of the plain they are grouped so as to present the appearance of a grove; others resemble ruined cities and castles in the distance, and still others are like the mammoths and saurians of by-gone ages quietly browsing. Standing among these weird piles, we were reminded of Irving's 'Ruins of the Alhambra,' and a strange feeling, such as the prophet might have experienced, returning after a thousand years to walk alone amid the desolated piles of Tyre and Sidon and the cities of the plain, came over us. Some parts of this table-land, being rent into great fissures, are difficult to explore. Climbing up and down smooth rocks at an angle of forty-five degrees is a work for tooth and nail, and it requires some nerve to leap across a chasm six or eight feet wide, so deep that the bottom is not discernible. Often we would stop and throw large bowlders down. For several moments we could hear them bound and rebound against the sides; then a dull thud would announce that they had struck bottom. A misstep in a place like this is something not pleasant to contemplate."

Cataract Cañon, the first great gorge on the Colorado proper, is about forty miles long, and the descent of the stream is so great, and the velocity of the water so tremendous, that it can only be compared to the rush of an express-train. Great buttresses of the walls stand out in the rushing flood at intervals, turning the swift current into boiling whirlpools, threatening destruction to any adventurous voyager.

At the foot of Cataract Cañon the walls of the chasm approach each other, and for a distance of seven miles the flood pours through Narrow Cañon at the speed of forty miles an hour.

This dangerous passage was accomplished by Powell and his men after great difficulty and labor, and constant risk of sudden death. The difficulties of navigation in some places among the rapids are shown in the fact that it sometimes took a whole day to go three miles. It was very difficult to resist the swiftness of the current and



Running the Rapids.

go slowly, and exceedingly dangerous to go any faster. The difficulty of running these rapids is derived from the fact that the walls, rising perpendicularly from the water's edge, prevent the use of ropes in letting down the boats. Care and skill, how-

ever, carried Powell and his men through. Oftentimes fierce sand-storms, driving through the gorge, would threaten to sink their frail craft, and at night, as they tossed and swung on these almost subterranean waters, which hissed and boiled beneath them, the inky darkness made a gloom and depression almost unbearable. Then, again, gleams of light from moon or stars would shoot down their welcome brightness, and transform the foaming river into a great phosphorescent caldron quivering with a weird and witch-like movement.

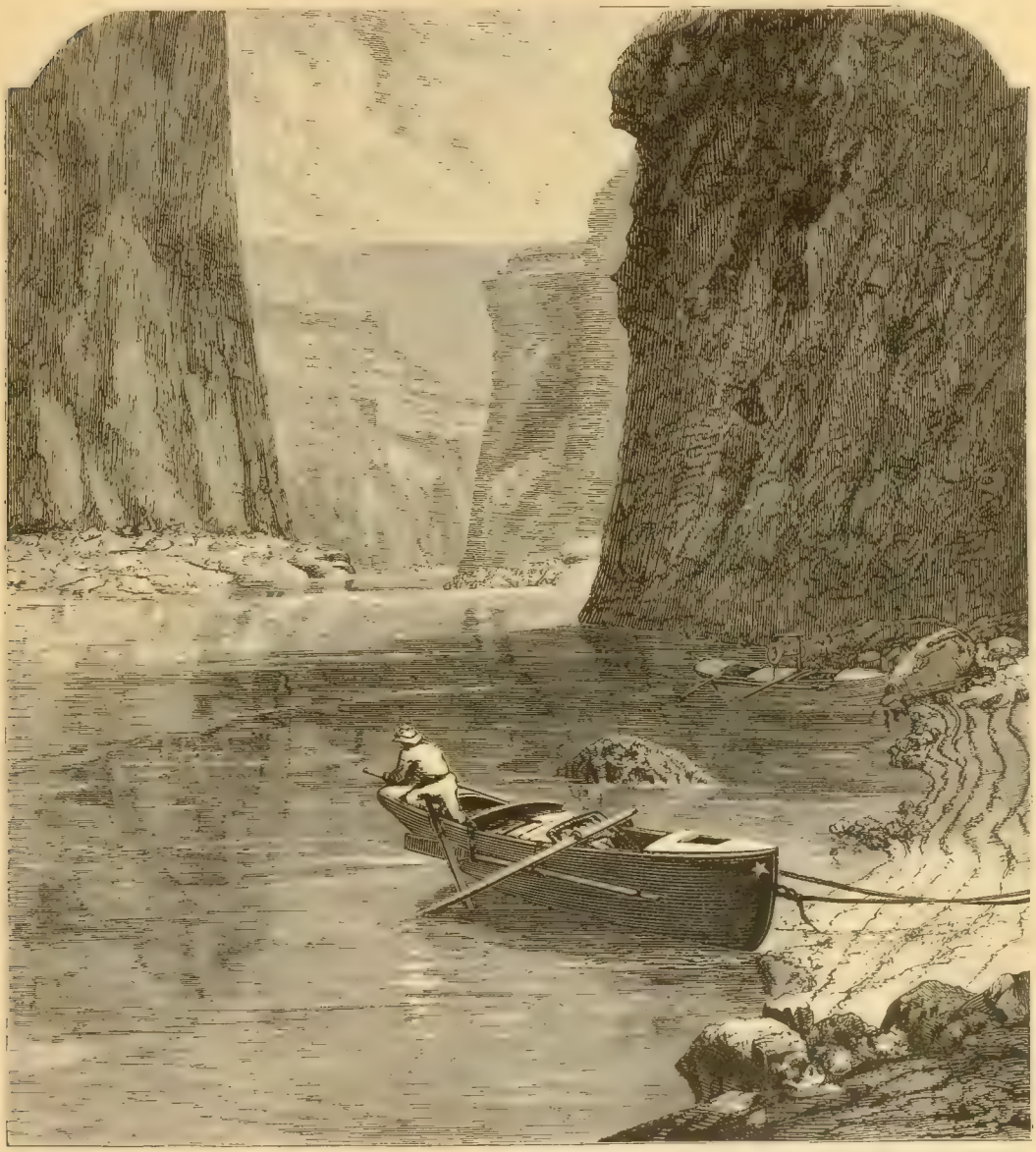
Just before reaching the mouth of the Paria River, which empties into the Colorado, the party landed one day for dinner near what is called the Musical Temple. This temple is a grotto extending five hundred feet into the mountain, with walls three hundred feet high, and so arched that the sky above seems a vein of blue glass running through the rock. The entrance is narrow, but the diameter is at least two hundred and fifty feet. A pool of clear, cold water bubbles up and forms a rill bordered with flowers and running vines, and near it a tiny, throne-shaped stone impresses a full-grown man with the awkwardness of having invaded Titania's bower. The reverberations of voice are startling, and quite as wonderful as in some of the chambers of the Mammoth Cave. Every sound, even to the dropping of a small pebble, is echoed from the nooks and crannies of the place, as if a legion of fairies mocked one's every movement. Such dainty caprices of Nature as this only made more solemn the sublime surroundings in which they were set.

The junction of the Paria River was the terminus of the Powell explorations for the season, as the provisions of the party had given out, their instruments were mostly lost, and the cold weather was setting in. The rest of the perilous voyage was made the next year, the boats having been carefully concealed and protected from the winter storms.

The daring explorers, on returning the following season, passed through still more arduous experiences, for the greatest of the cañons were yet to be conquered. The most beautiful of the cañons begins at the mouth of the Paria, and extends to the confluence of the Little Colorado (or Chiquito, as it is called by the Indians) with the greater river. This is known as Marble Cañon, and is sixty-five and a half miles long. The walls are of limestone or marble, beautifully carved and polished, and the forms assumed have a most deceptive resemblance to ruined architecture. The colors of the marble are various—pink, brown, gray, white, slate-color, and vermilion. No pencil-drawing could possibly express the beauty and grandeur of this gorge—only the painter's brush could reproduce anything closely truthful to the combination of the splendid and terrible exhibited in the sculpturing, the colors, and the awful depth of the Marble Cañon of the Colorado.

It will be of interest to the reader to get some clear idea of the way in which these wonderful formations were wrought. We can not do better than use the words of Major Powell, who has given more study to the subject than has any other scientist: "To a person studying the physical geography of this country without a knowledge of its geology, it would seem very strange that the river should cut through the

mountains, when apparently it might have passed around them to the east through valleys, for there are such along the north side of the Uintas, extending to the east where the mountains are degraded to hills. Then why did the river run through



Marble Cañon.

these mountains? The first explanation suggested is, that it followed a previously formed fissure through the range; but a very little examination will show that this is unsatisfactory. The proof is abundant that the river cut its own gorge—that the cañons are gorges of corrasion. Then why did not the river turn around this obstruc-

tion rather than pass through it? The answer is, that the river had the right of way; in other words, it was running ere the mountains were formed; not before the rocks of which the mountains are composed were deposited, but before the formations were folded so as to make a mountain-range. The contracting, or shriveling, of the earth causes the rocks near the surface to wrinkle, or fold, and such a fold was started athwart the course of the river. Had it been suddenly formed, it would have been an obstruction sufficient to turn the water into a new course to the east beyond the extension of the wrinkle; but the emergence of the fold above the general surface of the country was little or no faster than the progress of the corrosion of the channel. We may say, then, that the river did not cut its way *down* through the mountains from a height of many thousand feet above its present site, but, having an elevation differing but little perhaps from what it is now, it cleared away an obstruction by cutting a cañon, and the walls were thus elevated on either side. The river preserved its level, but the mountains were lifted up; as the saw revolves on a fixed pivot while the log through which it cuts is moved along. . . . The upheaval was not marked by a great convulsion, for the lifting of the rocks was so slow that the rains removed the sandstones almost as fast as they came up. The mountains were not thrust up as peaks, but a great block was slowly lifted up, and from this the mountain was carved by the clouds—patient artists who take time to do their work. Mountains are often spoken of as forming clouds about their tops: the clouds have formed the mountains. Lift a district of granite or marble into their region, and they gather about and hurl their storms against it, beating the rocks into sand; and then they carry them out into the sea, carving out cañons, gulches, and valleys, and leaving plateaus and mountains embossed on the surface."

The Marble Cañon runs out at the junction of the Chiquito and the Colorado, at which point the Grand Cañon begins. The head of the Grand Cañon is in the northern central part of Arizona, and it runs out in the northwestern part, lying wholly within that Territory. Its general course is to the west, but it makes two great bends to the south. It is two hundred and seventeen miles long, and the walls vary in height from four thousand to six thousand two hundred and thirty-three feet. There are in the cañon no perpendicular walls more than three thousand feet high. At that elevation from the river the sides slope back, and rise by a series of perpendicular cliffs and terraces to the level of the surrounding country. In many places it is possible to find gorges or side-cañons cutting down through the upper cliffs, by which one may approach to the edge of the perpendicular wall of the river-gorge. At three thousand feet above the river the chasm is only a few hundred feet wide. At the highest elevation the distance across is from five to ten miles. At various places the chasm is cleft through the primal granite rock to the depth of twenty-eight hundred feet. In such parts of the cañon, which are many miles of its whole extent, the chasm is narrow, the walls rugged, broken, and precipitous, and the navigation of the river very dangerous.

In no way can so vivid an idea of the Grand Cañon and its wonders be so clearly conveyed as by following in detail the experiences of Major Powell and his party in



Head of Grand Cañon at the Junction of the Chiquito and Colorado Rivers.

its exploration. After a rest of a few days at the mouth of the Chiquito, where Marble Cañon ends, the intrepid explorers embarked in their boats again, on their way down the Great Unknown, whose perils perhaps they would scarcely have ventured to face had they fully known them in advance. The first day passed without incident, but at daybreak of the second they found themselves in the jaws of a mighty granite gorge, narrower than any they had yet seen. The water became exceedingly swift, and, though the channel was free of broken rocks, the walls were set on either side with pinnacles, crags, and sharp angular buttresses, bristling with wind- and wave-polished spires extending far out into the river. Ledges of rock jutted into the stream, their tops sometimes just below the surface, sometimes rising many feet above, while pinnacles and towers broke the swift current into chutes, eddies, and whirlpools. A few

hours of this journeying, to which danger that could be overcome by sharp vigilance lent a keen zest, had passed, when their ears caught a loud roar ahead, that became louder and louder as the swift current swept their boats onward with great velocity. Soon they found themselves approaching the verge of a long, broken fall, full of dangerous obstructions and boiling rapids and whirlpools, making a descent of about eighty feet in nearly a third of a mile. There was no possibility of making a portage, so there was nothing to be done but to trust themselves to fate. On they sped, tossed and battered by the angry breakers, spun around by the whirlpools like tops, all but submerged at times by the big waves. But they all managed to get through safely, though with their clothes wetted through, and with a feeling that they had looked pretty closely into the face of death.

The walls of the cañon were now more than a mile in height, a thousand feet through granite crags their slopes and perpendicular cliffs rising one above the other to the summit. Down through these gloomy depths the boats glided, the voyagers listening always with intent ear, for the mad waters kept up a continual roar, and the narrow cañon was so winding that they could only see a few hundred yards ahead. But, with all the unknown danger before them to absorb their attention, the gigantic scenery of this solemn, mysterious way diverted thought from mere personal peril. "Even as we went," we are told, "there was some new pinnacle or tower, some crag or peak, some distant view of the upper plateau, some deep, narrow side-cañon, or some strangely shaped rock." Above all was the stunning conception of the height of the walls that locked them in—about the distance of Grace Church, New York, from the corner of Canal Street and Broadway; or of the Treasury Building, in Washington, from the Capitol; or of the Union Depot, Chicago, from the Lake Street bridge.

Major Powell speaks of the striking effects of the clouds floating above these great depths: "Sometimes they rolled down in great masses, filling the gorge with gloom; sometimes they hung above from wall to wall, covering the cañon with a roof of impending storm, and we could peer long distances up and down this cañon corridor with its cloud-roof overhead, its walls of black granite, and its river bright with the sheen of broken waters. Then a gust of wind would sweep down the side-gulch and make a rift in the clouds, revealing the blue heavens, and a stream of sunlight poured in. Again, the clouds drifted away into the distance, and hung around crags and peaks and pinnacles and walls and towers, covering them with a mantle that lifted from time to time and set them all in sharp relief. . . . Then the rain came down. Little rills were formed rapidly above; these soon grew into brooks, and the brooks into creeks, which tumbled over the walls in innumerable cascades, adding their wild music to the roar of the river. The waters that fall during the rain on these steep rocks are gathered at once into the river; they could scarcely be poured in more suddenly if some vast spout ran from the clouds to the stream itself."

On some days the course of river-travel was found so dangerous that many portages were necessary in advancing a mile, and a whole day would be exhausted in making a

very little progress. The portages were often only a trifle less dangerous than the river-travel, for the boats had to be carried up and around ledges and shelves of rock where a misstep would have been fatal; but the pluck of the explorer was proof against everything, in spite of the murmurings of some of his men, daunted by the perils they had to undergo, and the danger of their supply of rations giving out before that dreadful journey through the Grand Cañon could be finished. Often, while his men were engaged in making a portage of the boats around some impassable fall, Major Powell would climb, by circuitous and painful as well as perilous paths, to the top of the gorge. On one of these occasions he thus describes the appearance of the cañon: "I climbed the wall on the northeast to a height of about twenty-five hundred feet, where I could get a good view of a long stretch of cañon below. Its course was to the southwest. The walls seemed to rise very abruptly for twenty-five hundred or three thousand feet, and then there was a gentle sloping terrace on each side for two or three miles, and then cliffs rising from fifteen hundred to twenty-five hundred feet. From the brink of these the plateau stretches back to the north or south for a long distance. Away down the cañon on the right wall I could see a group of mountains, some of which appeared to stand on the brink of the cañon. The effect of the terrace was to give the appearance of a narrow, winding valley with high walls on either side, and a deep, dark, meandering gorge down its middle."

In some places the stream had not excavated its channel vertically through the rocks, but had cut obliquely, so that one wall overhung another. In other places it was cut obliquely below and vertically above, or *vice versa*, so that it was impossible to see overhead. The gigantic caprices wrought by the water-saw which had thus cleft its way down through the bowels of granite, limestone, and slate, thousands of feet, were almost numberless. At one place, near the center of the cañon, were discovered remarkable traces of volcanic action. Masses of lava, some of them shafts a hundred feet high, stand in the river for a distance of several miles. Just over the edge of a fall on the brink of a cañon was observed a cinder-cone, or extinct volcano, with a well-defined crater, from which vast floods of lava must have been poured into the river, and just where it poured over the cañon-side is the fall.

Just opposite the volcanic cone on the other side of the river, from a huge fissure in the towering wall, at the height of a hundred feet above the river, mammoth springs burst forth, pouring a great cascade of *salt* water into the river. The phenomena relating to this flood of lava excited Major Powell's attention. He thinks the cañon had been filled, to a depth of perhaps fifteen hundred feet, by more than one outpour of the fiery stream. This would dam the water back, and, in cutting through this great lava-bed, a new channel was formed, sometimes on one side and sometimes on the other. The cooled lava, being of harder texture than the other rocks, remains in some places; in others a narrow channel was cut, leaving a line of basalt on either side. In some places all the lava is gone, leaving a few patches only clinging to the sides of the walls. Sometimes the flow ran out into side-cañons, showing the basalt in fine columnar forms, or concentric prisms, repeating the shapes

which make the beauty and wonder of Fingal's Cave, on the Isle of Staffa. What a conflict of water and fire there must have been! Imagine a river of molten rock running down into a river of melted snow! Through the whole length of the Grand



Grand Cañon, looking down Two Thousand Feet.

Cañon the gorge is diversified by remarkable side-cañons, crowded with colossal and fantastic rock-forms, out of which the imagination can make all kinds of curious parallels, domes, pinnacles, towers, thrones, chambers, statues, banqueting-tables, etc.,

piled together in reckless confusion, as if by the hands of the Jotüns of Norse mythology. Over these side-cañons often burst magnificent cascades, but at other times not even the sound of falling water disturbs the silent mystery of these palaces of the giants.

The dangers of the subterranean water-way over which Major Powell was journeying were so great and so full of surprises that it was necessary to make frequent ascents up the almost impassable face of the great gorge. All the skill and audacity of the accomplished cragsman were necessary, and the leader, who had lost one arm during the late war, met many hair-breadth escapes in reaching points of outlook. One of these adventures he thus describes: "We came to a place in the river which seemed much worse than any we had met in our whole course. We landed, but could see no place where we could let down, and to run it (the fall) would be sure destruction. Then we crossed to examine it on the left. High above the river we could walk along on the top of the granite, which was broken off at the edge and set with crags and pinnacles, so that it was very difficult to get a view of the river at all. In my eagerness to reach a point where I could see the roaring fall below, I went too far on the wall, and could neither advance nor retreat, and stood with one foot on a little, projecting rock, and clung with my hand fixed in a little crevice. Finding I was caught here, suspended four hundred feet above the river, into which I should fall if my footing failed, I called for help. The men came and passed me a line, but I could not let go the rock long enough to take hold of it; then they brought two or three of the longest oars. All this took time, which seemed very precious to me. But at last the blade of one of the oars was pushed into a little crevice of the rock beyond me in such a way that they could hold me pressed against the wall. Then another was fixed in such a way that I could step on it, and I was rescued."

It was found that a lateral stream had washed bowlders into the river so as to form a dam, over which the river made a broken fall of eighteen or twenty feet; then there was a rapid beset with rock for two or three hundred yards, while on the sides points of the wall projected into the river. There was a second fall below no less dangerous, and beyond that a rapid, filled with huge rocks for several hundred yards. At the bottom of this a great wall projected itself half-way across the river. It had a sloping surface up-stream, and the water, coming down with all the momentum gained in the falls and rapids above, rolled up this inclined plane many feet, and tumbled over to the left, forming a perilous whirlpool. Here were a Scylla and a Charybdis combined with a vengeance. This complication of perils was overcome by letting the boats down over the first fall by ropes, running the rapids below, passing the second fall by a chute or a break in the rocky dam, and pulling the boats across the stream just below, with all the strength of the crews, to avoid being swept down on the great rock and the whirlpool. Only great skill, resolution, and quickness of stroke saved them from ruin in this attempt, and, though they were upset and got wet jackets, they pulled through safely, as they had all previous dangers.

Before this part of the river was passed, three men of the expedition had become

so discouraged by the dangers they had suffered and the unknown threat of what was to come, that they determined to leave the party and make the best of their way toward the settlements. Though Major Powell made calculations showing that they could not have more than eighty or ninety miles more of travel through the Grand Cañon before emerging into a more open country at the confluence of the Rio Vírgen, where it would be easy to get back to civilization, the rebels could not be persuaded. So the rations were fairly divided with them, a duplicate set of the records of the expedition intrusted to their care, in case Powell should be lost, and they set out with a God-speed from their forsaken comrades. These deserters had a tedious and difficult time, and, as Fate would have it, did not reach the settlements till after Major Powell.

Nearly every day brought fresh difficulties to be overcome, and one can hardly blame the faint-hearted three for giving up the enterprise which the indomitable Powell and his followers persisted in carrying out to the last. An experience similar to the one already described, and even more thrilling, we give in the explorer's own language:

"Just after dinner we came to another bad place. A little stream came in from the left, and below there was a fall and still another fall. Above, the river tumbled down over and among the rocks in whirlpools and great waves, and the waters were white with foam. We ran along the left above this, and soon saw that we could not get down on that side, but it seemed possible to let down on the other. So we pulled up-stream for two or three hundred yards and crossed. There was a bed of basalt on the northern side of the cañon, with a bold escarpment that seemed a hundred feet high. We could climb it and walk along the summit to a point where we were just above the head of the fall. Here the basalt seemed to be broken again, and I directed the men to take the line to the top of the cliff and let the boats down along the wall. One remained in the boat, to keep her clear of the rocks and prevent her line from being caught on the projecting angles. I climbed the cliff and passed to a point just over the fall and descended by broken rocks, and found that the break of the fall was above the break of the wall, so that we could not land, and that still below the river was very bad, and there was no possibility of a portage. Without waiting further to examine and determine what should be done, I hastened back to the top of the cliff to stop the boats from coming down. When I arrived I found that the men had let one of them down to the head of the fall; she was in swift water, and they were not able to pull her back, nor were they able to go on with the line, as it was not long enough to reach the higher part of the cliff which was just before them; so they took a bight around a crag and I sent two men back for another line. The boat was in very swift water, and Bradley was standing in the open compartment holding out his oar to prevent her from striking against the foot of the cliffs. Now she shot out into the stream and up as far as the line would permit, and then wheeling drove headlong against the rock; and then out and back again, now straining on the line, now striking against the cliff. As soon as the second line was brought we passed it down to him, but his attention was all taken up by his own situation, and he did not see what we were doing. I stood on a projecting rock waving my hat to



View in Grand Cañon.

gain his heed, for my voice was drowned in the roar of the falls, when just at that moment I saw him take out his knife from its sheath and step forward to cut the line. He had evidently decided that it was better for him to go over with his boat as it was, than to wait for her to go all to pieces. As he leaned over the boat again sheered into the stream, the stern-post broke away, and she was loose. With perfect composure Bradley seized the great scull-oar, placed it in the stern row-lock and pulled with all his might—and he was a strong fellow—to turn the bow of the boat down-stream, for he wished to go bow down rather than to drift broadside on. Only two strokes were made, a third just as she went over, and the boat was fairly turned; she went down almost beyond our sight, though we were more than a hundred feet above the river. Then she came up again on a great wave, and down and up, then around behind some great rocks, and was lost in the tumultuous foam below.

"We stood speechless with fear; we saw no boat; Bradley was gone. But now, away below, we saw something coming out of the waves. It was evidently a boat; a moment more and we saw Bradley standing on deck, swinging his hat, to show that he was all right. But he was in a whirlpool. The stern-post of his boat remained attached to the line which was in our possession. How badly she was disabled we knew not. I directed Sumner and Powell to run along the cliff and see if they could not reach him from below. Rhodes, Hall, and myself ran to the other boat, jumped aboard, pushed out, and away we went over the falls. A wave rolled over us, and our craft became unmanageable; another great wave struck us, the boat rolled over and tumbled and tossed I know not how. All I know is that Bradley was soon picking us up. Before long we had all right again and rowed to the cliff, and waited until Sumner and Powell came up. After a difficult climb they reached us, when we ran two or three miles farther, and turned again to the northwest, continuing till night, when we ran out of the granite once more."

On August 29th they emerged from the Grand Cañon, whose stupendous portals they had entered on the 13th, and well might they give thanks that a journey, encompassed with terrible dangers, where death had stared them in the face almost every day, was safely over.

Mr. Thomas Moran, the artist, and a companion, made a visit to two of the most interesting portions of this cañon in the summer of 1873, accompanied by guides from Major Powell's party, some of whom were still engaged in completing the results of their survey, and a further brief description from this source will be of interest:

"Our first journey," we read, "was to the Toroweap Valley. By following down this valley, we passed through the upper line of cliffs to the edge of a chasm cut in red sandstone and vermilion-colored limestone or marble, twenty-eight hundred feet deep and about one thousand feet wide. Creeping out carefully to the edge of the precipice, we could look down directly on the river, fifteen times as far away as the waters of Niagara are below the bridge. Mr. Hillers, who passed through the cañon with Major Powell, was with us, and he informed us that the river below was a raging torrent; yet it looked from the top of the cliff like a small, smooth, sluggish



Grand Cañon, showing Amphitheatre and Sculptured Buttes.

river. The view looking up the cañon is magnificent, and beyond the most extravagant conception of the imagination. In the foreground lies a profound gorge, with a mile or two of the river seen in its deep bed. The eye looks twenty miles or more through what appears like a narrow valley formed by the upper line of the cliffs. The many-colored rocks in which the valley is carved project into it in vast headlands two thousand feet high, wrought into beautiful but gigantic architectural forms. Within an hour of the time of sunset the effect is strange, weird, and dazzling. Every moment, until light is gone, the scene shifts, as one monumental pile passes into shade and another, before unobserved, comes into view. . . . Our next visit was to the Karbal Plateau, the highest plateau through which the river cuts. It was only after much hard labor, and possibly a little danger, that we could reach a point where we could see the river, which we did from the edge of Powell Plateau, a small plain severed from the mainland by a precipitous gorge two thousand feet deep, across which we succeeded in making a passage. Here we beheld one of the most awful scenes on the globe. While on the highest point of the plateau, a terrific thunder-storm burst over the cañon. The lightning flashed from crag to crag. A thousand streams gathered on the surrounding plain, and dashed down into the depths of the cañon in water-falls many times the height of Niagara. The vast chasm which we saw before us, stretching away forty miles in one direction and twenty miles in another, was nearly seven thousand feet deep. Into it all the domes of the Yosemite, if plucked from the level of that valley, might be cast, together with all the mass of the White Mountains in New Hampshire, and still the chasm would not be filled."

The country through which the Colorado cleaves such a Titanic gash is interesting aside from the remarkable physical features of it. Major Powell made many interesting excursions during his different explorations in Arizona, and our knowledge of several highly interesting Indian tribes has been materially advanced by the interest he has shown in studying these remnants of earlier races. The Navajos, a tribe belonging to the Apache stock, acquired many arts from the partially civilized Indian races who early inhabited New Mexico and Arizona, and they still continue their friendship with the Moquis Pueblos, an Indian people now nearly extinct, but believed by Major Powell to be descended from the Aztec race. The Navajos cultivate the soil rudely but extensively, and have large herds and flocks of horses, cattle, sheep, and goats. Their women also spin and weave cotton and wool with great skill. The celebrated Navajo blankets are probably equal if not superior to any made in the world, being so closely woven that they are absolutely water-tight. In 1872 the Navajos, on the reservation near Fort Defiance, numbering 9,714 souls, had 130,000 sheep and goats, 10,000 horses, and a corresponding number of cattle! They have lost their old Indian dialect, and now speak only Spanish. A fine-looking, robust race, their men are models of athletic vigor, and many of their women of no little beauty. They dress decently, covering their whole body in textures of their own weaving, generally of bright colors. The warriors wear a helmet-shaped deer-skin cap, and their arms are in the main bows, lances, and rawhide shields. This fine Indian tribe has

made considerable advance in education, as they have a Presbyterian mission and school among them, which have wrought with good results.

But the most interesting of the Indian peoples visited by Major Powell in his



Street in a Moquis Village.

explorations of the cañons of the Colorado are the Moquis Pueblos. The ruins of cities, bearing upon their dismantled walls the strange records of a population swallowed up in the darkness of the past, found among the cliffs and cañons of the Colorado, have given great interest to the section of Arizona where the Moquis Indians

are found, who, whether or not a remnant of the ancient Aztecs of Mexico, differ from all the other Indian races of North America. In 1530 Nino de Guzman, Governor of New Galicia, was excited by curiosity, and stories of great treasures prevalent among the Indians, to fit out an expedition to go in search of the seven cities supposed to exist between the Gila and the Colorado Rivers. Much of the romantic charm investing these ruins and unknown towns is the outcome of the fact that, as in the course of nature this country became barren and sterile, and the waters through different causes were dried up, it became necessary that the inhabitants should move to other regions. They could not move their cities, hence the ruins still found in the desert of Arizona. But these people and their ruins, whether Moquis or Aztecs, have an interesting place in the archæology of the continent.

The towns are generally built upon an eminence commanding a view of the surrounding country, and so situated that they can only be approached through a narrow defile or through a chasm in the rocks. The houses are formed of mud and stone, two or three stories high, and ranged in the form of hollow squares. The first story is built solid without any opening in the walls, and the second, being somewhat smaller, forms a kind of terrace where the entrance is constructed, and access was had from the outside by means of ladders. These were drawn up after use, thus making the place secure against attack. The lower stories were used as store-rooms, and the remains of corn-cobs still found in them prove that the ancient occupants relied on agriculture as well as the chase for a subsistence. In many cases, as has been stated in previous pages, houses have been found built on the rock-terraces of such almost impassable spots as the gorges of the Colorado. These probably were erected by scattered fragments of the tribe, after they had been driven out of their towns by the fate of war or the inhospitality of Nature.

The inhabited towns of to-day are seven in number, occupying twenty-five miles square, and are governed by separate chiefs, who mix with one another very little. Although one people, and known to the world as the seven Moquis Pueblos or Dying Cities, each has a distinctive name, and is entirely independent of the others.

Mr. Beaman, one of the Powell party, who visited the village or city of Oribay, writes as follows: "On the morning after my arrival I was awakened by the confused ringing of bells, from the deep-toned cow-bell to the silvery tinkling of the miniature chimes of Santa Claus's reindeer-team. So terrific was the din that I thought there must be a fire, and had a sleepy idea that a fire-engine was rattling over the stones. The only engines that appeared, however, were copper-colored *Injins*, elaborately dressed in their aboriginal skins, with strings of bells girdled at their waists. The novelty of the sight was an eye-opener, and I set to watching their movements. The roofs of the houses were covered with people bowing toward the rising sun, and paying not the slightest attention to the bell-men, who started off at full speed, and after running a mile returned. Turning to Lie (the Indian guide) for an explanation of these strange manœuvres, I was informed that an old tradition existed among his people that at some future day Montezuma will come from the

skies to restore to his children their former glory and power. They expect him to come from the rising sun, in which his spirit is supposed to dwell, and for this reason they send out messengers to meet him daily in the pomp and circumstance which has been described."

The people believe that the sooner their villages go to decay the sooner their deliverer and rebuilder will come; therefore everything is left to go to decay. The



Navajo Indians.

introduction of improvements is considered an unpardonable sin against their faith, and they refuse to accept any annuities from the United States, so as to obviate all contact with the white man. Yet the Moquis are most skillful weavers of cotton and wool, make highly artistic pottery, have considerable knowledge of smelting and forging metals, are excellent agriculturists, and show attainments superior to those of any

other tribe of American Indians. They dress in a style similar to that of the Navajos, though with less gaudy colors. The women are characterized by superior beauty, this charm being specially noticeable among the younger ones. One of the marked peculiarities is the style of head-dressing prevalent among the maidens. As soon as a girl comes of a marriageable age, her crowning glory is *coiffed* upon either side of the head in two distended bat-like wings, somewhat resembling the fans of a propeller or windmill. These wings are about a foot long, and, projecting from the head of a bright-eyed Indian girl, a lover might fear lest in a gale of wind his chocolate-colored Venus should be borne aloft. When a girl becomes a wife, these wings disappear. The purity of womanhood, so strictly maintained in this tribe, is in marked contrast to other Mexican races. The Moquis matrons are above suspicion, while frailty is unknown among their daughters.

One remarkable fact observable in the Moquis villages is the decoration of the walls of their houses and their rolls of bark, which appear to be records, with pictorial representations not only of objects in nature, but hieroglyphics, of shape not unlike those of Egypt. These are drawn and often colored with marked artistic skill, and there are certain members of each community who devote themselves entirely to this work, mostly old men, who appear to belong to some priestly caste, and to be treated with great respect by the other Indian villagers. These things would indicate an origin different from that of the other Indian tribes, and go far to justify that belief in Aztec descent held by Major Powell and other archæologists who have studied their customs and characteristics.

The wonderful Colorado cañons have excited, perhaps, a greater interest among scientists during the last few years than any other physical phenomena of our land, so rich in natural wonders. Probably their parallel is not known on our globe, and only their difficulty of access has prevented many curiosity-seekers and tourists from penetrating to a region so characterized by marvels. This difficulty, however, is likely soon to disappear, as a railroad from Salt Lake City is planned, which will take the traveler within a day's journey or so from the magnificent Grand Cañon, which surpasses all the others in magnitude and sublimity. When this projected route is completed, it will be as easy to reach this masterpiece of Nature's power as to go to the Yosemite at the present time. Perhaps the time will come in the not distant future when these great cañons will be spoken of almost as familiarly as the falls of Niagara or the Mammoth Cave; or, it may be, tourist parties will be organized to picnic on the topmost cliffs of the almost immeasurable gorges, at the bottom of which, more than a mile below, the swift and turbid Colorado rolls its angry flood.



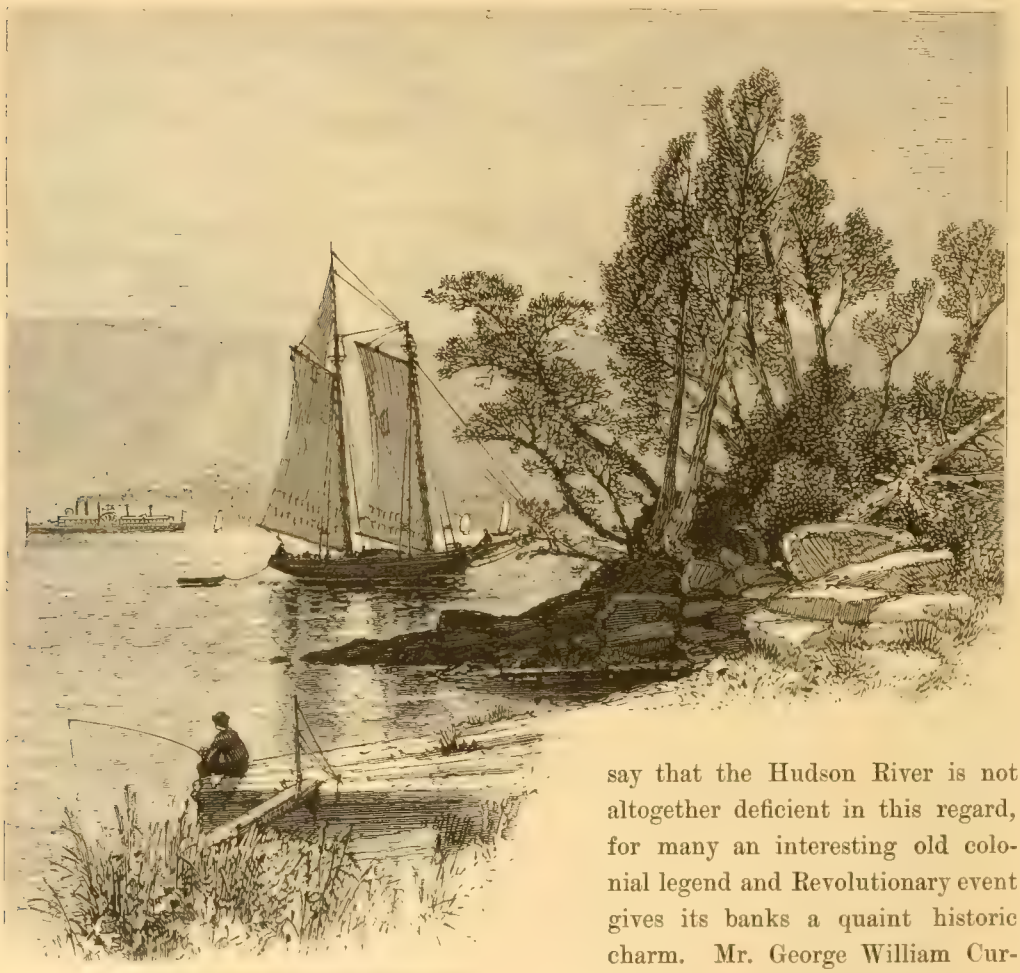
Day-Boat leaving New York.

THE HUDSON RIVER.

Characteristic features of river scenery—The Palisades—Tarrytown, its traditions and associations—The home of Washington Irving—The Highlands—The legendary interest of the region—West Point, our great military school—How the cadets live and study—The charms of West Point and its surroundings—The scene of Drake's "Culprit Fay"—The story of the poem, and how it was suggested—The literary associations of the region about Cornwall—Idlewild, the home of N. P. Willis—Newburg and its surroundings—The Catskills, and their charm as a summer resort—The upper Hudson—A river celebrated throughout the world for its beauty.

TRAVELERS from abroad have frequently found the fault with American scenery that while in its grander aspects, especially in the far West, its wildness is almost terrible, its gentler phases lack that gentleness and softness of tone which comes of tasteful and careful culture, and an intelligent pursuit of the art of landscape-gardening. This element of the unkempt and ragged, which sometimes repels an admi-

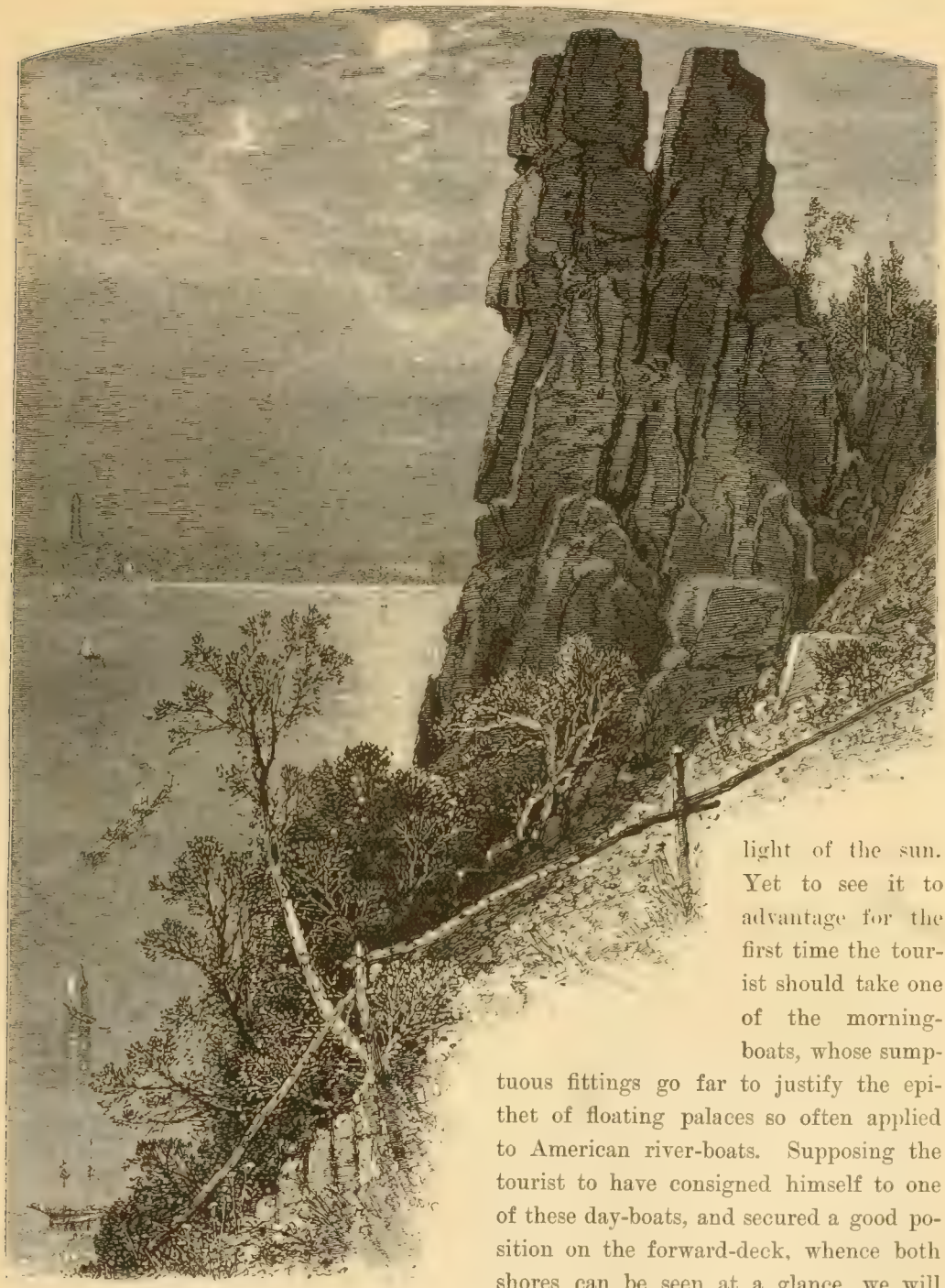
ration that would otherwise be attracted by picturesque beauty, is generally absent from the scenery of the Hudson River. Many, indeed, have been free to admit that, in varied and pictorial charm, it excels the world-famed Rhine, though it lacks that powerful appeal to the historic imagination which comes of ancient and time-honored ruins associated with important events in the growth of civilization. Yet we may



View of the Palisades from Eastern Shore.

say that the Hudson River is not altogether deficient in this regard, for many an interesting old colonial legend and Revolutionary event gives its banks a quaint historic charm. Mr. George William Curtis says, in comparing the Hudson with famous European rivers, "The Danube has in part glimpses of such grandeur, the Elbe has something of such delicately penciled effects, but no European river is so lordly in its bearing—none flows in such state to the sea."

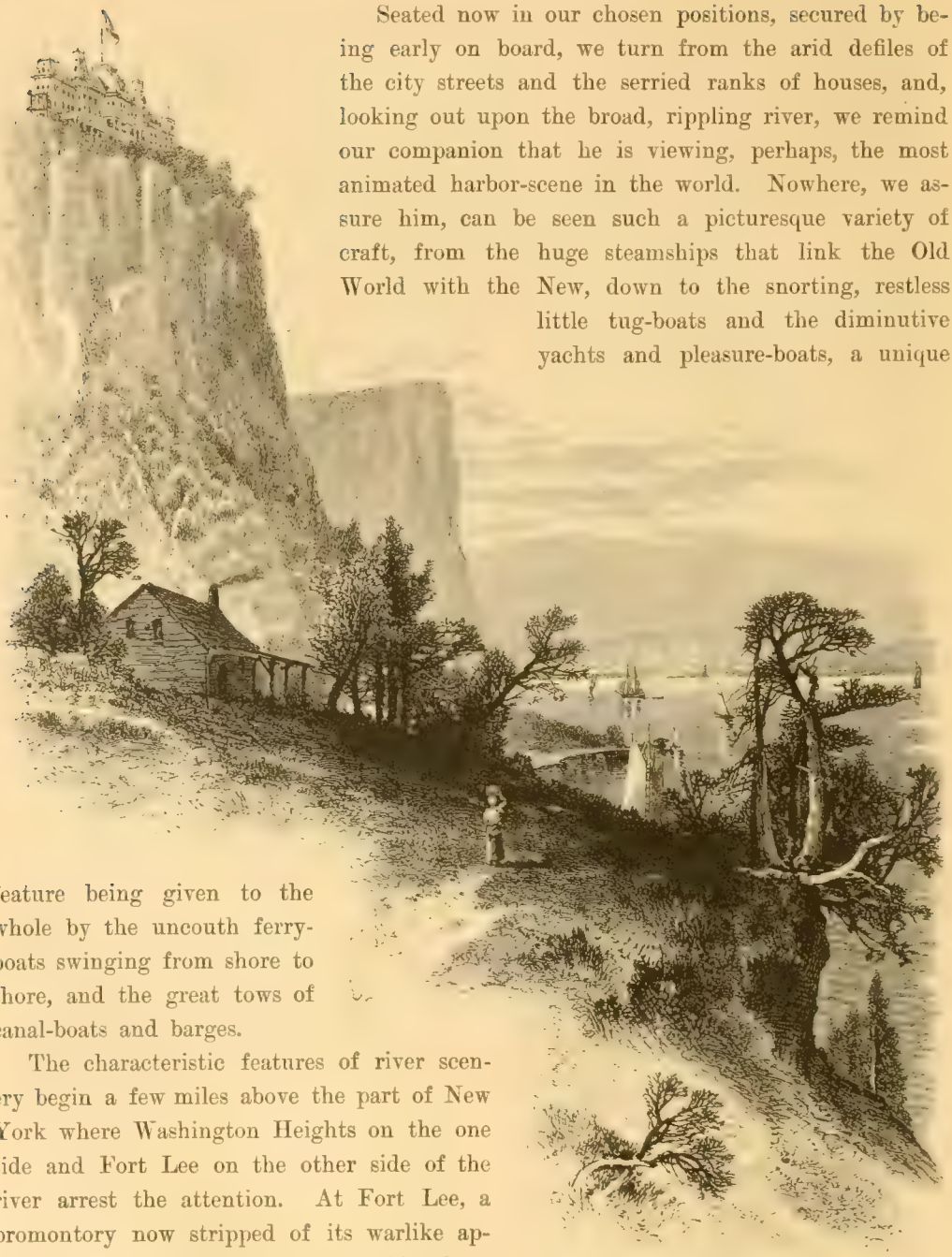
The surpassing charm of this river can not be gainsaid, and it is beautiful indeed under any guise. Seen by soft moonlight from one of the spacious night-boats which ply in summer between New York and Albany, one can hardly resist the conviction that its weird and fairy-like charm can not be repeated under the garish



A Pinnacle of the Palisades.

light of the sun. Yet to see it to advantage for the first time the tourist should take one of the morning-boats, whose sumptuous fittings go far to justify the epithet of floating palaces so often applied to American river-boats. Supposing the tourist to have consigned himself to one of these day-boats, and secured a good position on the forward-deck, whence both shores can be seen at a glance, we will ask permission to accompany him, and will endeavor to add to his enjoyment by pointing out, not too obtrusively, the more salient features of the double panorama which will speedily begin to unfold itself.

Seated now in our chosen positions, secured by being early on board, we turn from the arid defiles of the city streets and the serried ranks of houses, and, looking out upon the broad, rippling river, we remind our companion that he is viewing, perhaps, the most animated harbor-scene in the world. Nowhere, we assure him, can be seen such a picturesque variety of craft, from the huge steamships that link the Old World with the New, down to the snorting, restless little tug-boats and the diminutive yachts and pleasure-boats, a unique feature being given to the whole by the uncouth ferry-boats swinging from shore to shore, and the great tows of canal-boats and barges.



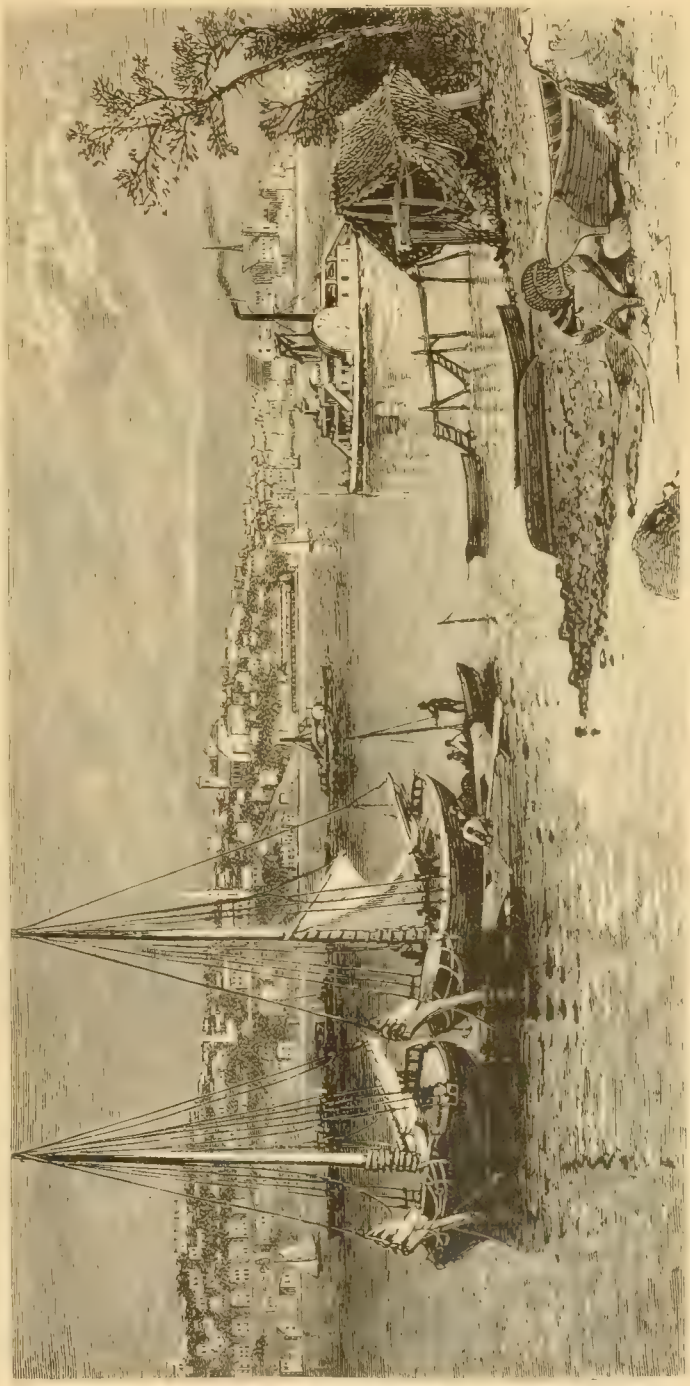
Palisade Mountain House.

The characteristic features of river scenery begin a few miles above the part of New York where Washington Heights on the one side and Fort Lee on the other side of the river arrest the attention. At Fort Lee, a promontory now stripped of its warlike appointments and known as an agreeable pleasure-resort, begin the Palisades, a wall of perpendicular cliffs from three hundred to six hundred feet in height, which line the western bank of the river for nearly twenty miles, and form one of the most striking features of its scenery. The face of the

frowning wall is naked and rugged, but the summit is a pleasant table-land clothed in thick woods. The Palisade Mountain House, four miles above Fort Lee, crowns a tall escarpment of the cliff, and occasionally a cottage may be seen peeping through the trees; but as a rule the solitude of the precipices as seen from the river appears as unbroken as the gloomy cliffs of the Saugenay.

The stern monotony of this wall of precipice makes an admirable foil to the soft beauty of the opposite New York shore. The eastern bank of the river is really a continuous suburb of New York, and the hills are crested with innumerable villas and cottages, the tree-clad slopes furnishing a charming picture of well-kept lawns and gardens. At Yonkers and Tarrytown these suburbs become considerable towns, but even as towns they do not lose that rural aspect which pervades the whole. The largest of them remind the river voyager quite as much of parks as of cities.

The first town seen after leaving the city is Riverdale, which is simply a group of elegant mansions, aristocratic in their exclusiveness. The city of Yonkers, now a beautiful and thriving place, was for a long



Yonkers.

time an old-fashioned Dutch village, but by the opening of the Hudson River Railway became a favorite suburb of the metropolis, and is one of the best examples of a prosperous American semi-rustic city. It contains among its relics of the olden time the Philipse manor-hall, a quaint and spacious stone edifice, formerly belonging to the lords of the Philipse manor, but now converted to municipal purposes. The manor-house was built by Frederick Philipse, who came to New York in the time of



Sunnyside.

Governor Stuyvesant. He purchased large tracts of land from the Indians and secured grants from the Government, and this vast estate was formally erected by royal charter under the name of Manor Philipsburg. Two manor-houses were erected, one at Sleepy Hollow and one at the present site of Yonkers. The third lord of the manor endeavored to preserve a strict neutrality during the Revolutionary War, but he was finally attainted of treason and his property confiscated. At Hastings, twenty-one miles from New York, the shore is so thickly dotted with country villas that it is not

easy to mark the beginning or the end of the town. Opposite Hastings, at Indian Head, the Palisades reach their most picturesque point, and at Piermont they recede from the shore and cease to make a feature of the river scenery. At this point, also, the river broadens into a beautiful bay, ten miles long and from two to five miles wide, renowned as the Tappan Zee.

As the steamer plows through the middle of this noble expanse, the scene on both sides of the river is very beautiful. On the western shore extends a line of undulating, richly wooded hills, at the foot of which nestles the picturesque town of Nyack. On the eastern side, which rises in graceful, receding slopes, are the pleasant villages of Irvington, Tarrytown, and Sing Sing, while handsome villas abound on every hand. A little above Irvington and near the river, though hidden from view by the dense growth of shrubbery, is Sunnyside, the former home of Washington Irving, and now one of the classic memorials of American literature. It is a stone structure made of many gables, the eastern side embowered in ivy, the earlier slips of which were presented to Irving by Sir Walter Scott at Abbotsford. The original house was built by Wolfert Acker, a privy councilor of Peter Stuyvesant, who had inscribed over the door the Dutch motto, "Lust in Rust" (pleasure in quiet). The house was thence called Wolfert's Rest, corrupted afterward into Wolfert's Roost, and is made the subject of one



Nyack.



Tarrytown.

of Irving's sketches. A few miles above Irvington is Tarrytown, the quaint designation of which, we are told by Irving, was given in former times by the good housewives of the neighboring country on account of the inveterate habit of their husbands to linger about the village taverns on market-days. Not long ago Tarrytown was little more than a quiet river settlement, with a single wharf, where sloops received and delivered merchandise. It has become a large, well-built town, and the hills that overlook it are adorned with beautiful residences which are set in charming grounds. We are now viewing these shores and the towns from the deck of a steamer, but no one can fully appreciate the charms of the river who does not explore all the varied and picturesque places that abound on it; who does not ascend the hills, note all the elegance and cultivation that wealth and taste have lavished on them, and get varied glimpses of the river itself as it flows beneath him covered with white sails and many forms of picturesque boats. Western rivers have little more than steamboats and a few rafts. On the broad bosom of the Hudson are grand steamboats, brilliant, bird-like yachts, broad-sailed sloops and schooners, and groups of barges and canal-boats in tow of a steam-tug. The variety and number of the river-craft are so great that the scene is always an animated picture.

Tarrytown, like all this region, is historically identified with the story of Arnold and André. It was upon a spot now within the town that André was arrested, while returning to the British lines, after a visit to Arnold; and at Greenburg, three miles



Old Dutch Church, Sleepy Hollow.

east of the town, a monument has been erected, commemorating the event, upon which the inscription gives the date of the capture, and the names of the three patriots—Paulding, Williams, and Van Wart—who, resisting all bribes, seized the unhappy André, and thereby saved their country.

Another great interest that Tarrytown possesses is in its identification with Washington Irving. Sunnyside is so near Tarrytown that that renowned author always attended Christ Church at the latter place; of this church he was warden at the

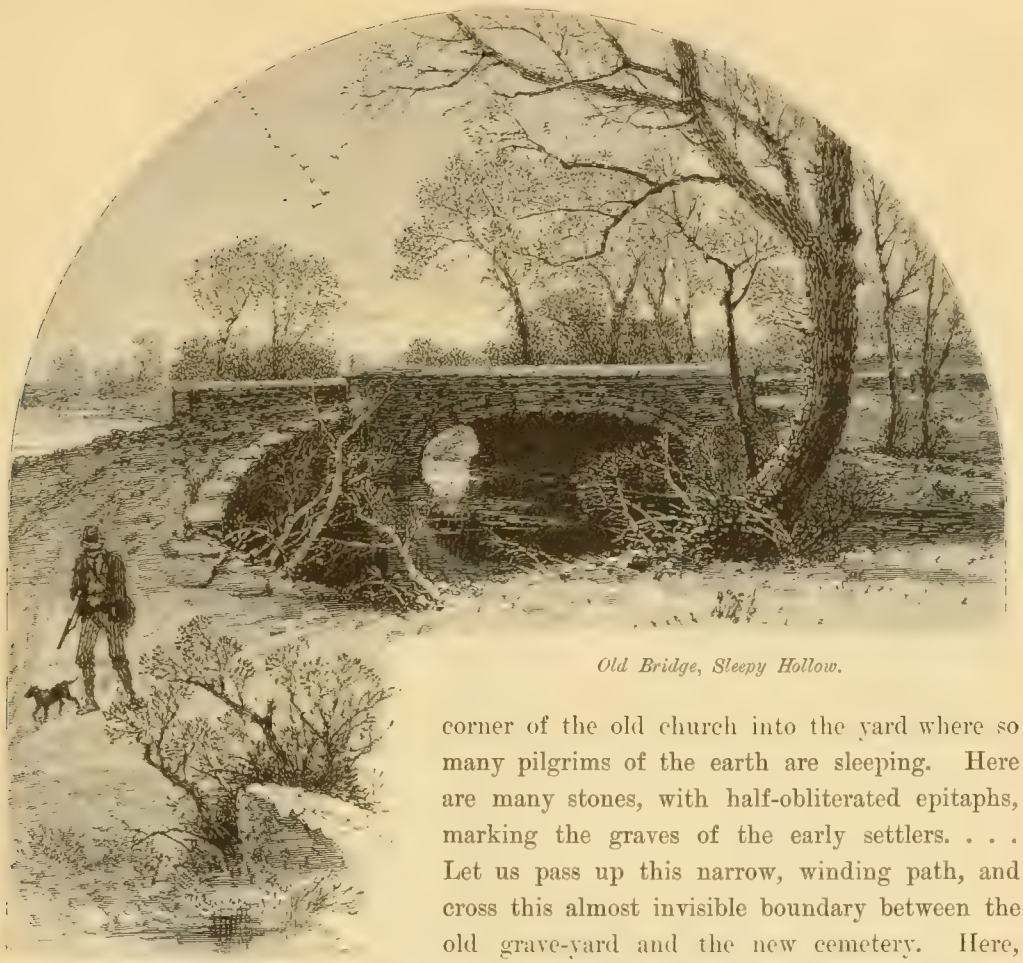
time of his death; and upon its walls a handsome tablet has been erected to his memory.

But a greater interest attaches to the old Dutch church at Sleepy Hollow. "Not far from Tarrytown," Irving has written, "there is a little valley, or rather a lap of land, among high hills, which is one of the quietest places in the whole world. A small brook glides through it, with just murmur enough to lull one to repose; and the occasional whistle of a quail, or tapping of a woodpecker, is almost the only sound that ever breaks in upon the uniform tranquillity. If ever I should wish for a retreat, whither I might steal from the world and its distractions, and dream quietly away the remnant of a troubled life, I know of none more promising than this little valley." At the opening of the Hollow, by the side of a winding lane, stands the ancient church, which dates back to the year 1699, and is the oldest religious edifice in the State. It is a quaint little building, with a tiny spire inclosing a bell, on which is inscribed in Latin, "If God be with us, who can be against us?" Close by there is a cemetery, in which the remains of Irving are buried.

It is only a short distance to the old bridge, made famous by Irving in his legend of Ichabod Crane. As we walk over it, how many delightful memories are revived! We laugh again at the escapade of the school-master, with his "soft and foolish heart toward the sex," and withal we can not help liking his rival in love for Katrina—the stalwart and muscular Brom Bones. "Once upon a time," the legend goes, "Ichabod taught the Dutch urchins the three elementary *R's*, and at the same time paid court to the fair Katrina, who was the daughter of old farmer Van Tassel. Brom Van Brunt, nicknamed Brom Bones, loved the same maiden, and resolved to drive the school-master from the village. One dark night Ichabod started home from the Van Tassel house in very low spirits. The hour was as dismal as himself. Far below him, the Tappan Zee spread its dusky and indistinct waste of waters, with here and there the tall mast of a sloop riding quietly at anchor under the land. In the dead hush of midnight he could even hear the barking of the watch-dog from the opposite shore of the Hudson; but it was so vague and faint as only to give an idea of his distance from this faithful companion of man. . . .

"Now, a belief was extant in a specter called the Headless Horseman of Sleepy Hollow, supposed to be the spirit of a Hessian trooper, whose head had been carried off by a cannon-ball. Near the old church this horrid ghost made its appearance in pursuit of Ichabod, who was bestride an inflexible horse named Gunpowder. The terrified school-master made all haste to reach the old bridge, passing which he would be beyond the reach of the ghostly pursuer. He spurred old Gunpowder forward, but, looking back, he beheld the specter close beside him, in the very act of throwing his head at him. The crash came, Ichabod rolled on the ground, and the specter and Gunpowder rushed by him in a whirlwind. A shattered pumpkin was found the next day in the road, and not long after Brom Bones led the fair Katrina to the altar; but Ichabod was never afterward seen or heard of."

Mr. Lossing, describing the old church, says: "Let us climb over the stile by the



Old Bridge, Sleepy Hollow.

corner of the old church into the yard where so many pilgrims of the earth are sleeping. Here are many stones, with half-obliterated epitaphs, marking the graves of the early settlers. . . . Let us pass up this narrow, winding path, and cross this almost invisible boundary between the old grave-yard and the new cemetery. Here, well up toward the summit of the hill, near the receiving-vault, upon a beautiful sunny slope, is an inclosure made of iron bars and privet hedge, with open gate, inviting entrance. Here, in line, stand several slabs of white marble, only two feet in height, at the head of as many oblong hillocks, covered with turf and budding spring flowers. Upon one of these, near the center, we read:

WASHINGTON,

SON OF

WILLIAM AND SARAH S. IRVING,

DIED NOV. 28, 1859,

AGED 76 YEARS, 7 MONTHS, AND 28 DAYS.

"This is the grave of the immortal Geoffrey Crayon. Upon it lie wreaths of withered flowers which have been killed by frosts and buried by drifts of lately departed snow. These will not remain long, for all summer fresh and fragrant ones are laid upon that honored grave by fair hands that pluck them from many a neighboring garden. . . . This lonely burial-spot, from which may be seen Sleepy Hollow, the



Palisades above Nyack, with Distant View of Sing Sing.

ancient church, the sparkling waters of the Po-can-te-co spreading out into a little lake above the picturesque old dam at the mill of Carter Philipse, Sleepy Hollow Tavern, Tappan Bay, and all its beautiful surroundings, was chosen long ago by the illustrious author of 'The Sketch-Book' as his final resting-place."

Above Nyack, on the western shore, the Palisades come down once more to the river's edge, and form a precipitous bluff which bears the name of Verdrietigh Hook, also called Point No-Point, owing to its deceptive appearance when seen from the river below as a great headland. Sing Sing, on the opposite side, is recognized by the massive stone buildings, which constitute the famous State prison. At the upper end of the Tappan Zee the river narrows sharply, and the vine-clad Croton Point separates the Tappan Zee from Haverstraw Bay, which is another lake-like widening of the river, with the village of Haverstraw on its western shore, and a long line of white limestone cliffs. As the steamboat crosses this beautiful bay, the Highlands begin to loom up boldly in the distance; and at its upper end, where Verplanck's Point on the east and Stony Point on the west contract the river to a comparatively narrow channel, the outlines of the mountains have become

quite distinct. Stony Point is a bold, rocky eminence, with a light-house on the summit. During the Revolutionary War it was the site of a fort which had been captured by the British. Mad Anthony Wayne was ordered to recapture it, and this he did by



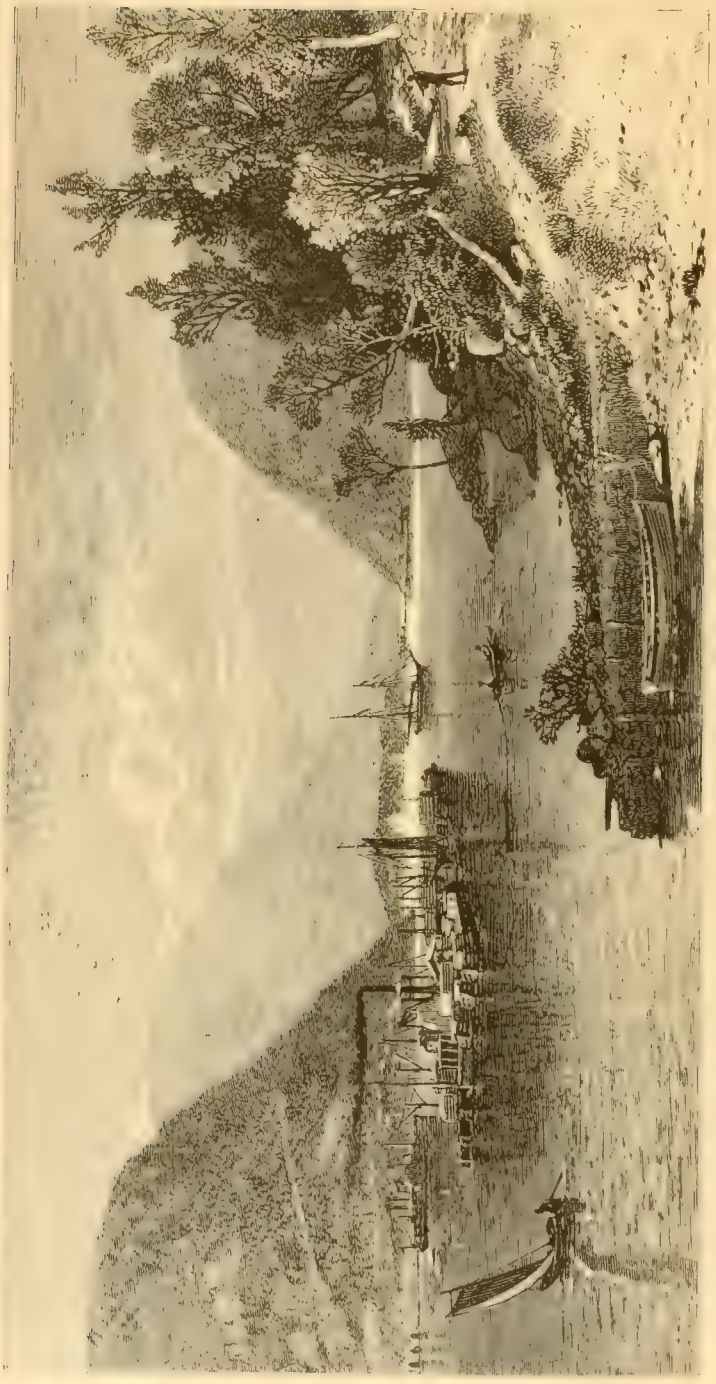
Croton Point.

a daring assault. With two columns of picked men he advanced close to the enemy's picket-guard undiscovered. With a fierce rush the Americans charged on the fortification, and in one hour's time the fort and entire garrison were captured. The steamboat now safely rounds these two points, and emerges at the pretty town of Peekskill,



Stony Point and Haverstraw Bay, from above.

so named after a Dutch navigator, Jan Peek, who, according to popular tradition, in ascending the river, took the creek on which the town stands for the main stream, but who, becoming enamored of the spot, settled here and named the creek Peek's Kill. The town was the headquarters of General Putnam during the Revolution;



Entrance to the Highlands.

and here he hanged a British spy, an event specially remembered on account of the curt reply of "Old Put" to the British flag of truce that interposed in the prisoner's behalf: "Edward Palmer, an officer in the enemy's service, was taken as a spy lurking within our lines. He has been tried as a spy, condemned as a spy, and will be executed as a spy. P. S.—4 P. M. He is hanged."

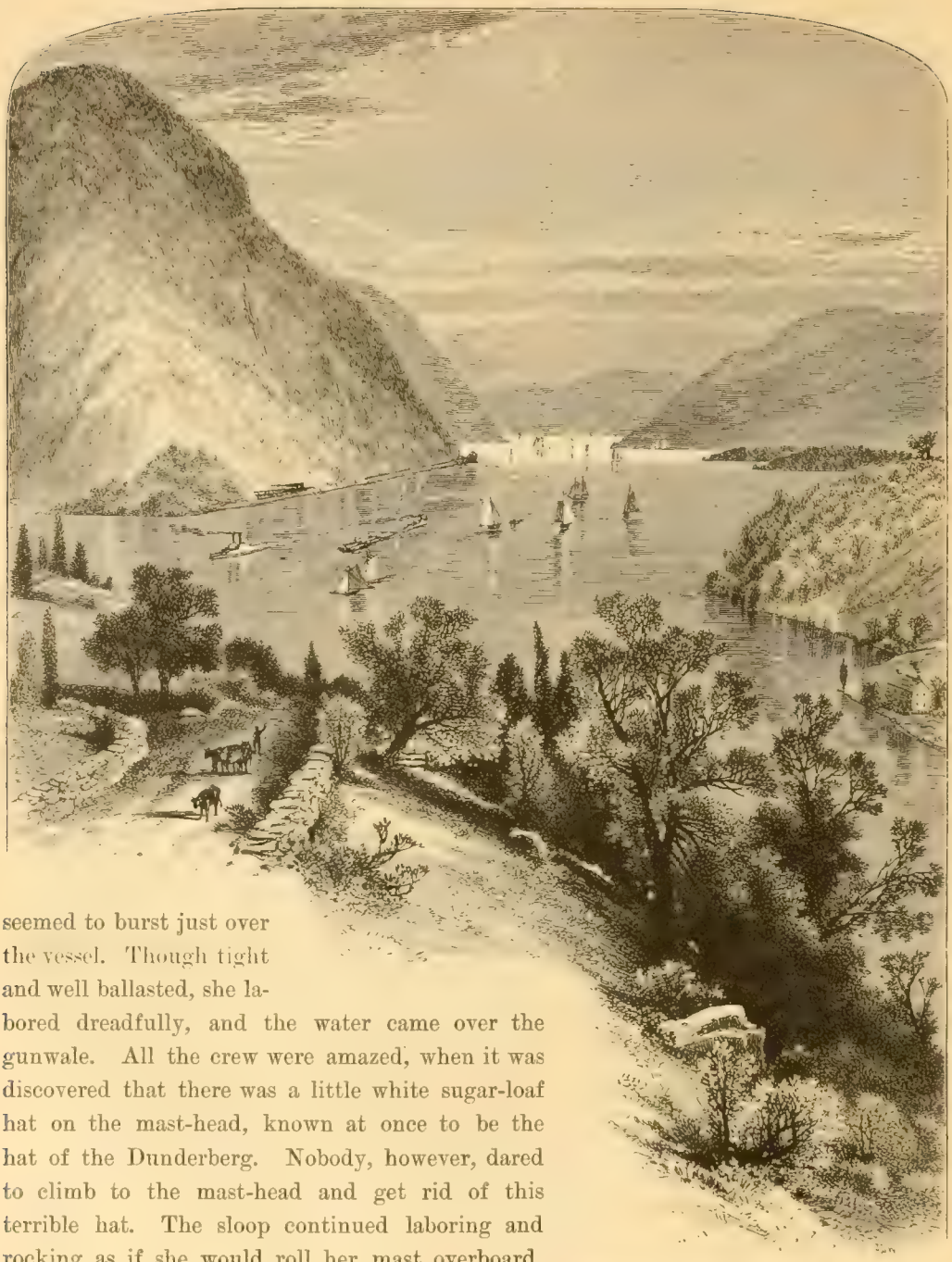
We are now entering the Highlands, which, from this point to Newburg, a distance of seventeen miles, is unsurpassed by any river-scenery in the world. To the left may be seen Dunderberg, or Thunder Mountain, whose steep sides are perpetually invoking gusts of wind and rain on its rugged and bold crest. As the legend goes, it is the home of a boisterous little Dutch goblin, in trunk-hose and sugar-loaf hat, for an account of whom we must turn again to Irving: "The captains of river-craft declare that they have heard him, in stormy weather, in the midst of the turmoil, giving orders in Low Dutch for the piping up of a fresh gust of wind, or the

rattling off of another thunder-clap; that sometimes he has been seen surrounded by a crew of little imps, in broad breeches and short doublets, tumbling head-over-heels in the rack and mist, and playing a thousand gambols in the air, or buzzing



Iona Island and "Anthony's Nose."

like a swarm of flies about Anthony's Nose; and that, at such times, the hurry-scurry of the storm was always the greatest. One time a sloop, in passing by the Dunderberg, was overtaken by a thunder-gust that came scouring round the mountain, and



View from Fort Montgomery, looking south.

seemed to burst just over the vessel. Though tight and well ballasted, she labored dreadfully, and the water came over the gunwale. All the crew were amazed, when it was discovered that there was a little white sugar-loaf hat on the mast-head, known at once to be the hat of the Dunderberg. Nobody, however, dared to climb to the mast-head and get rid of this terrible hat. The sloop continued laboring and rocking as if she would roll her mast overboard. In this way she drove quite through the Highlands until she passed Pollopel's Island, where it is said the jurisdiction of the Dunderberg spirit ceases. No sooner had she passed this bourn, than the little hat whirled into the air like a top, carried all the clouds up into a vortex, and hurried

them back to the summit of Dunderberg, while the sloop sailed on over waters as smooth as a mill-pond. Nothing saved the sloop from utter wreck except the fact that she had a horseshoe nailed to the mast-head, a wise precaution against evil spirits adopted by all the Dutch captains that navigated this haunted river."

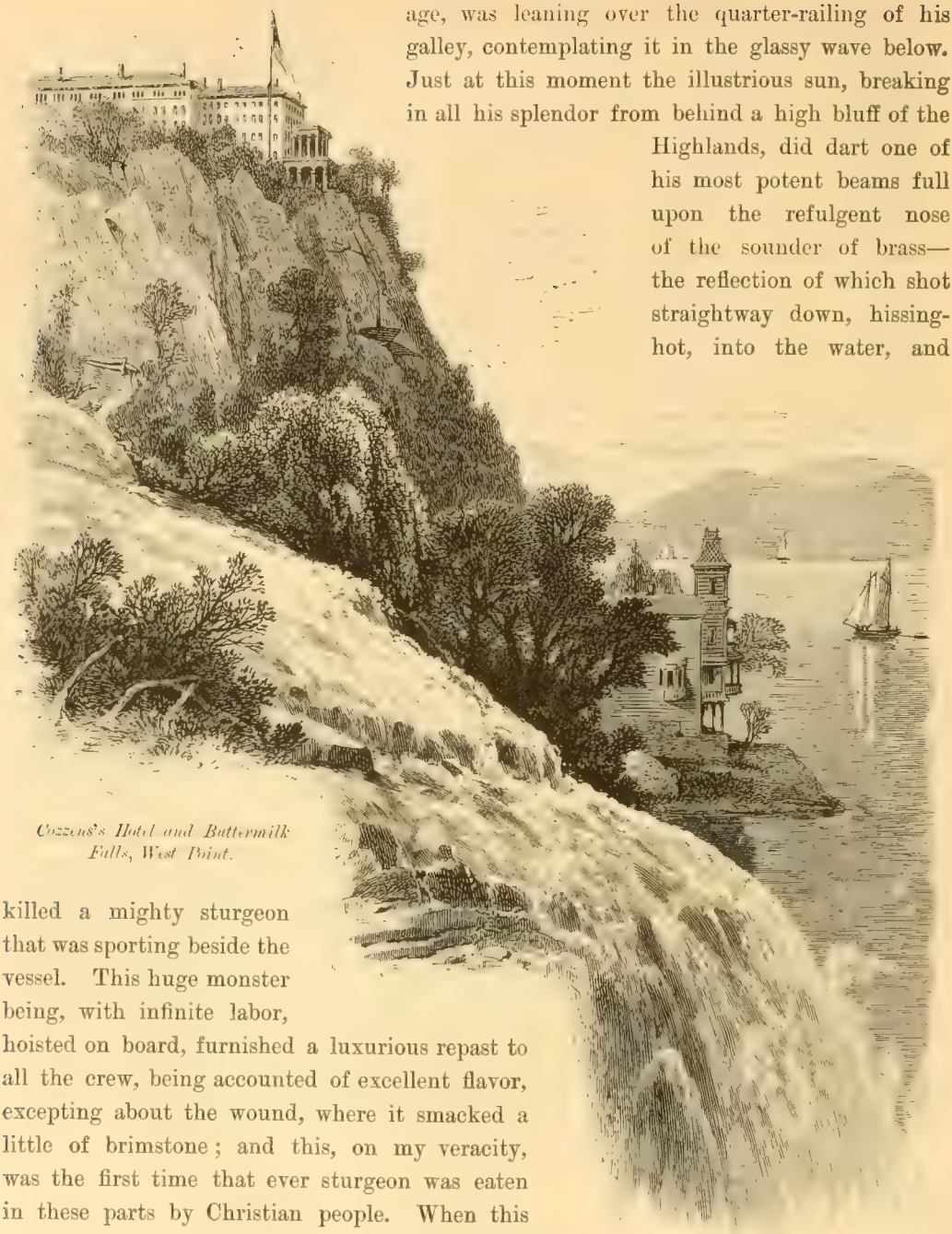
Looking across the river, Anthony's Nose appears—a bold promontory, over twelve



Sugar-Loaf Mountain.—A Storm in the Highlands.

hundred feet high. It is massive in form, sharp in outline, and has no peculiar likeness to the feature after which it is named; but it is the subject of one of the legends recorded by Irving, which add so much to the pleasure of the traveler. Be it known, then, that the nose of Anthony, Governor Stuyvesant's trumpeter, was decked with the true regalia of a king of good fellows. "Now it happened that, bright and early in the morning, the good Anthony, having washed his burly vis-

age, was leaning over the quarter-railing of his galley, contemplating it in the glassy wave below. Just at this moment the illustrious sun, breaking in all his splendor from behind a high bluff of the Highlands, did dart one of his most potent beams full upon the refulgent nose of the sounder of brass—the reflection of which shot straightway down, hissing-hot, into the water, and killed a mighty sturgeon that was sporting beside the vessel. This huge monster being, with infinite labor, hoisted on board, furnished a luxurious repast to all the crew, being accounted of excellent flavor, excepting about the wound, where it smacked a little of brimstone; and this, on my veracity, was the first time that ever sturgeon was eaten in these parts by Christian people. When this astonishing miracle became known to Peter Stuyvesant, he, as may well be supposed, marveled exceedingly; and, as a monument thereof, he gave the name of Anthony's Nose to a stout promontory in the neighborhood, and it has continued to be called Anthony's Nose ever since that time." This mountain is tunneled at the river-edge, for the Hudson River Railway.



Cozzens's Hotel and Buttermilk Falls, West Point.

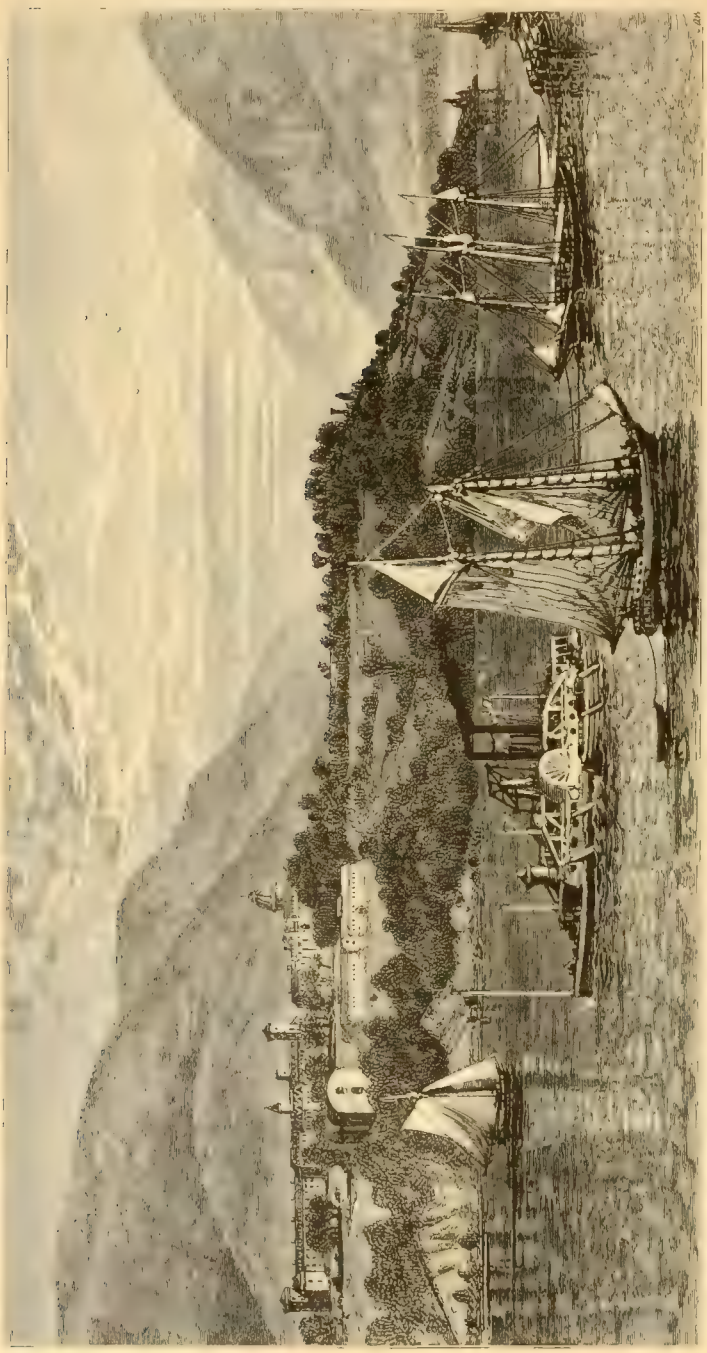
Near this point is a picturesque island, called Iona, of some three hundred acres in extent, lying within a triangle formed by Dunderberg, Anthony's Nose, and Bear Mountain. Grapes are grown extensively upon the island, and the uncultivated portion is a favorite picnic-ground for excursion-parties from New York. On the western bank of the river, near the base of Dunderberg, is a picturesque inlet named Montgomery Creek, which has its source in a mountain-stream that tumbles over a cascade about half a mile from its mouth. Fort Montgomery and Fort Clinton stood on each side, their guns commanding a wide range. They were constructed at the beginning of the Revolutionary War, and played important parts during the autumn of 1777.

Following the river in its curve to the northeast, a fine view is obtained of the symmetrical cone of Sugar-Loaf Mountain, at the foot of which stood Beverley House, where the traitor, Benedict Arnold, was breakfasting when the news of André's capture was brought him, and whence he fled to the British war-vessel anchored in the stream below. From this point, also, a distant glimpse of Fort Putnam, of Revolutionary fame, may be had, crowning the heights on the left; and on the right we come in sight of Buttermilk Falls, descending over inclined ledges a distance of one hundred feet, and forming at times a fine cascade, though the heats of summer are apt to dwindle it to insignificance. On the summit of the cliff above is the spacious Cozzens's Hotel, one of the favorite summer retreats of New York pleasure-seekers.

We have now arrived at West Point, the famous Military Academy of the United States. West Point in summer is the theatre of an endless round of pleasant dissipations. Distinguished visitors crowd in here in July and August, and the hotels are filled to overflowing. A prominent element of the visitors is the young-ladydom of the country, and the life of the cadets, who live in camp during this period, is enlivened with innumerable picnics and evening parties. As the steamboat approaches the landing, it is crowded with people and vehicles, which have come to receive the new arrivals. Bright parasols and dainty bonnets blossom in reflection on the water, and peals of merry laughter ring in the air.

The neighboring country, for a distance of thirty by forty square miles, was originally granted by Governor Fletcher, of New York, to Captain John Evans, of the Royal Artillery, and was known as Evans's Patent. This right of possession was vacated by an act of the Provincial Legislature in 1699, and the heirs of the new proprietors of the land disposed of 2,105 acres to the United States in 1826. Until the War for Independence, says Lossing, to whom we must acknowledge our indebtedness for many valuable historic facts, there appears to have been no dwelling or settler on the tract excepting such as was necessary to secure the patent. But in May, 1775, it was resolved to establish a military post in the Highlands, and fortifications were built at several points, including Forts Clinton and Montgomery. These were of good service, and when the boom and chain stretching across the river above Peekskill were destroyed by Sir Henry Clinton, another contrivance of the same kind was placed at West Point. An additional fort was also built, and was called Fort Arnold, together with several extensive water-batteries.

The garrison was successively commanded by McDougall, Heath, Howe, Arnold, and Knox. General Knox remained in command until 1785, when he was appointed Secretary of War. In 1787–'88 the redoubts were dismantled, the other buildings sold, and thus ended the occupation of West Point as a garrisoned post.



West Point.

The scheme of a training-school for soldiers had already been mooted in Congress, but it was not until 1812 that an act was passed authorizing the establishment of the Military Academy on its present broad foundations, and since then there has been a steady improvement in its organization and appointments.

A picturesque road leads from the landing to the grounds, and, arrived there, visitors are allowed to ramble through the massive buildings and beautiful avenues at will. The Cadets' Barracks is the most imposing structure. It is of stone, castellated in the style of the ancient Tudors, and it contains one hundred and seventy-six rooms, of which one hundred and thirty-six are cadets' quarters. Each room is small, and very plainly furnished, the same principles being adopted here as at the An-



View at West Point, north from the Artillery-Grounds.

napolis Naval Academy. No luxuries are permitted, and the students are trained to endure all the rigors of the active military life for which they are preparing.

Two persons are assigned to each room, and the entire furniture consists of two

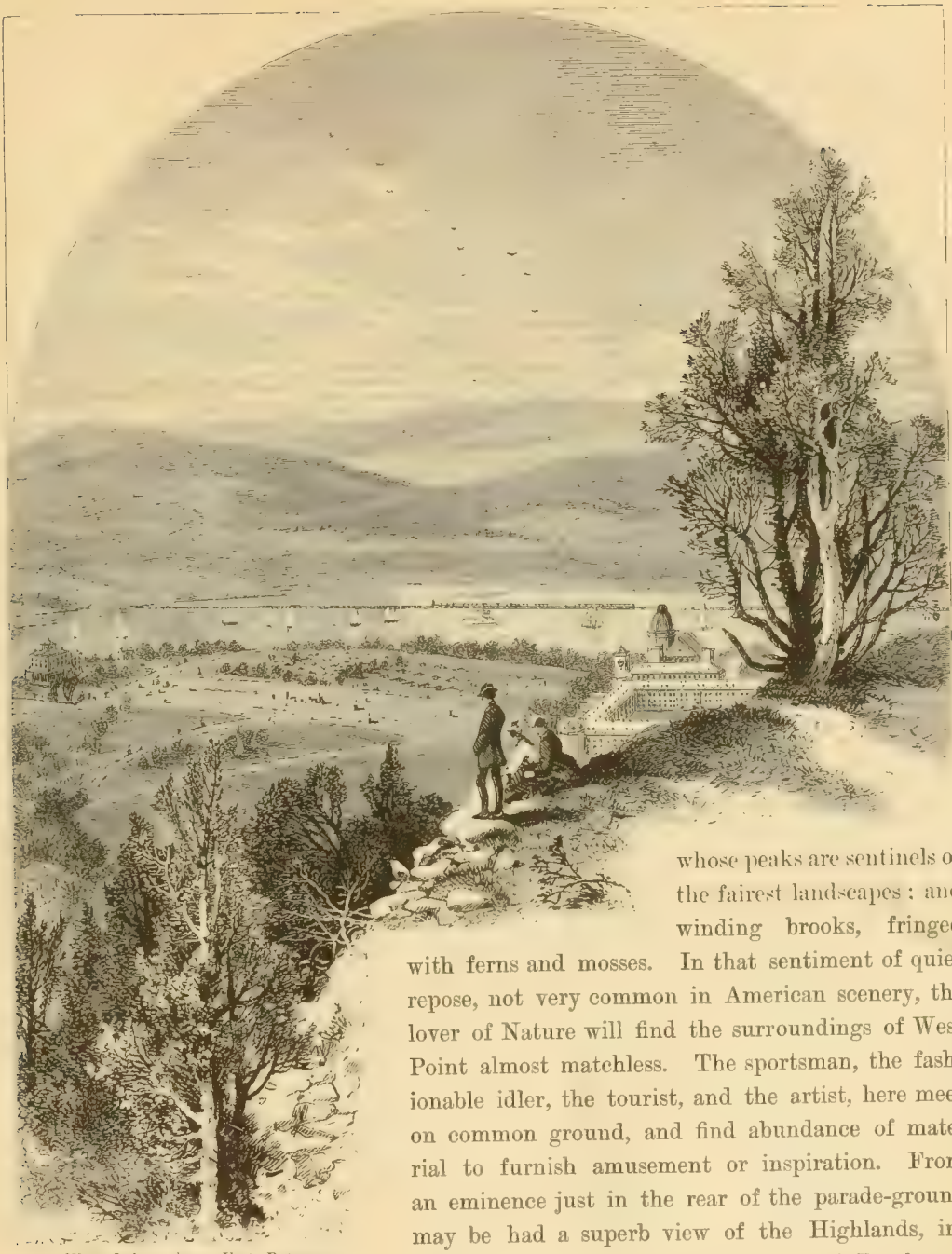
iron bedsteads, chairs, tables, and a few other necessary articles. The cadet is not allowed to have a waiter, a horse, or dog, but is required to make his own bed and keep his quarters tidy. He is aroused at five o'clock in the morning by the gun. At half-past five his room must be in order, bedding folded, and wash-bowl inverted. Woe betide him if he is dilatory! He is visited by a superior, who reports his delinquency, or, as he would more vividly say, "skins" him. From half-past five until seven he is supposed to be occupied by studies, when twenty-five minutes are allowed him for breakfast; then half an hour for recreation, and then five hours for recitations, class-parades, and other duties. The time between noon and two P. M. is allowed for dinner and recreation. Work is over at four o'clock, and the rest of the day is occupied by amusements and dress-parades. Lights are extinguished in quarters at ten, and the embryo soldier is supposed to go to sleep.

The class-rooms are situated in a stone building three stories high, and include a chemical laboratory, gymnasium, artillery model-room, mathematical model-room, picture-gallery, and gallery of sculpture. The Mess Hall is another building of fine proportions, one hundred and seventy feet in length and sixty-two in width. There are also an observatory and library, which in style and material resemble the barracks, and a little to the west of these is the chapel, built in 1836. It contains a fine painting over the chancel, and trophies taken from the British and Mexicans. On the walls are several black-marble tablets, bearing the names, in gilt letters, of generals of Revolutionary fame. Benedict Arnold's has only the words "Major-General ——, born 1740," with furrows in the stone, as if the name had been cut out. The administration building, south of the chapel, contains the offices of those in charge of the school.

Each step brings the visitor into the presence of some interesting object. On a pleasant grass-plot may be seen a chain composed of links of the great iron boom which once crossed the river, which now inclose the brass mortars captured from General Burgoyne at Saratoga. In the cemetery, under massive sarcophagi, lie the remains of General Winfield Scott, General Bowen, and General Robert Anderson, the defender of Fort Sumter. A short distance from Officers' Row is a bronze statue of Major-General Sedgwick, killed in the battle of Spottsylvania, which was erected by the Sixth Army Corps to the memory of their old commander.

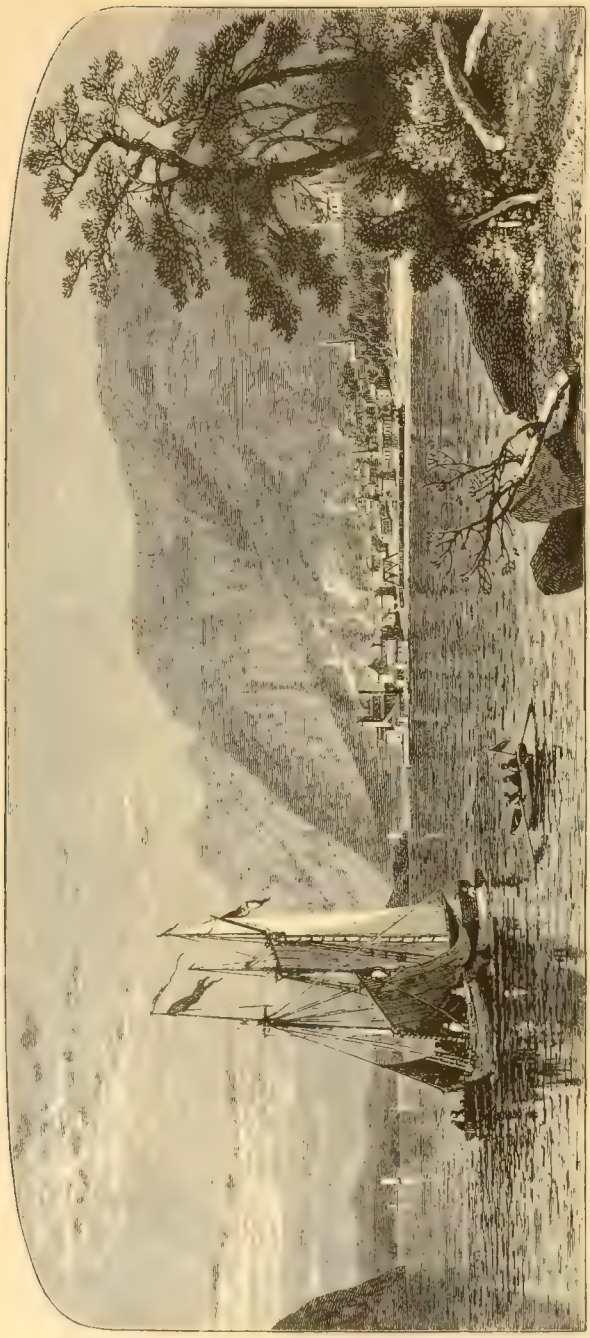
The grounds are laid out with great taste, and exquisite views present themselves at every turn. No one should miss seeing Flirtation Walk or Kosciuszko's Garden. The former is a secluded path, overhung by trees and shrubbery, and extending along the river. It is a most romantic promenade, and much used by the cadets and their pretty guests. Kosciuszko's Garden is said to have been the spot where the gallant Pole, who fought so bravely for America, and who was intimately associated with West Point, was wont to spend his hours of meditation. A fountain bubbles into a marble basin here, fronting some picturesque rocks which also bear Kosciuszko's name.

The country about West Point abounds in lovely scenery of every description—cascades pouring beneath leafy colonnades; glens nestling in primitive wildness; mountains



West Point, from Fort Putnam.

whose peaks are sentinels of the fairest landscapes: and winding brooks, fringed with ferns and mosses. In that sentiment of quiet repose, not very common in American scenery, the lover of Nature will find the surroundings of West Point almost matchless. The sportsman, the fashionable idler, the tourist, and the artist, here meet on common ground, and find abundance of material to furnish amusement or inspiration. From an eminence just in the rear of the parade-ground may be had a superb view of the Highlands, including the Storm King, Cro'nest, and Breakneck Mountains; the river, shining like a plain of rippling silver; Newburg Bay, and the Fishkill Range. In Revolutionary times Fort Putnam stood here, with guns threatening the enemy at all points. It was the most important of the Highland fortifications, and was erected by Colonel Rufus Putnam, under direction of Count Kosciuszko.



Cold Spring, from Constitution Island.

A portion of the walls and some of the casemates, grass-grown and picturesque in their ruin, still remain as an interesting memorial of the past.

Opposite West Point, on the east bank, is Cold Spring, chiefly notable for its iron-foundries, the chimneys of which pour out wreaths of smoke, and it was here that Major Parrott cast the celebrated guns which did such good service during the war of the rebellion. But, at night-time, when the furnaces glow in the darkness, and throw myriad sparks toward the sky, it is weirdly picturesque, and supplies a cheerful color to the view. Night in the Highlands, indeed, is scarcely less lovely than the day. The river breaks with the faintest murmur on the precipitous shore; the walls of the mountains are an impenetrable blackness, against which the starry path overhead looks the more lustrous. Trembling echoes strike the hill-sides plaintively, as a great steamer cleaves her way up the stream, or a tow-boat, with a string of canal-boats in her wake, struggles against the tide; while fleets of sailing-vessels drift past.

Near Cold Spring, on an elevated plateau, is "Undercliff," the home of the late George P. Morris, so well known as the author of "Woodman, spare that Tree," and who was so long associated with N. P. Willis in various literary ventures.

Just above the village there are two majestic hills separated by a narrow valley. The nearest is called Bull Hill, or Mount Taurus, and is over fifteen hundred feet

high. It is said that long ago the neighborhood was troubled by a wild bull, and that the Dutch farmers of those days formed a party to destroy the fierce beast. They hotly chased him for many a mile, and at last the brave Knickerbockers drove him into the river.

Breakneck Hill, just north of Cold Spring, is over eighteen hundred feet high, and formerly a huge rock stood out on its front, bearing a wonderful resemblance to



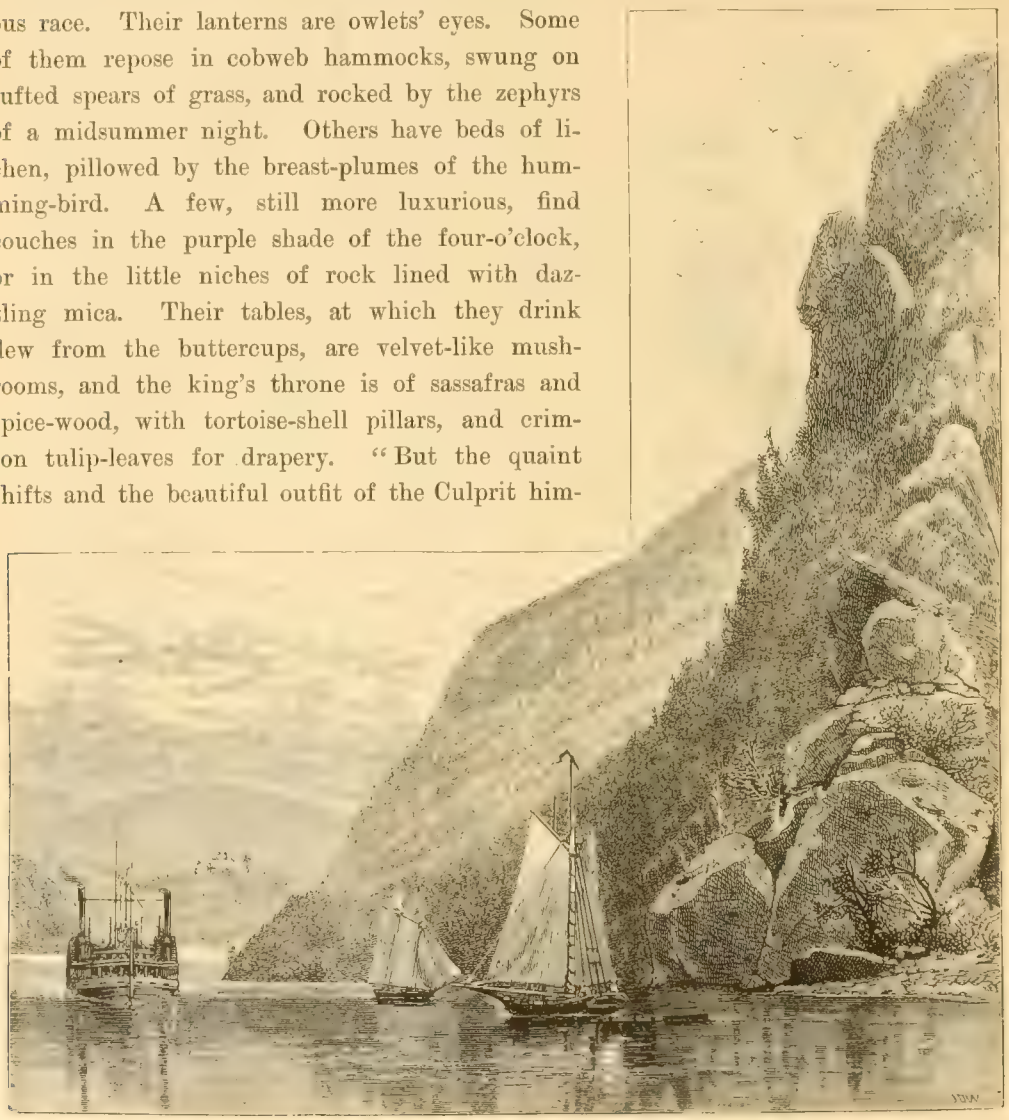
Breakneck Mountain, from Little Stony Point.

a human face. The picturesque mountain of Cro'nest is the scene of one of the most charming of American poems. In the summer of 1816 Fenimore Cooper, Fitz-Greene Halleck, Joseph Rodman Drake, and a friend, were strolling through the Highlands, when the conversation turned on the availability of Scotch streams and mountains for the uses of poetry. Drake, in opposition to his friends, took the ground

that American scenery was not less suggestive in stimulating the fancy. To prove this he wrote, in three days, the charming poem of "The Culprit Fay," the poet being then only twenty-one years of age.

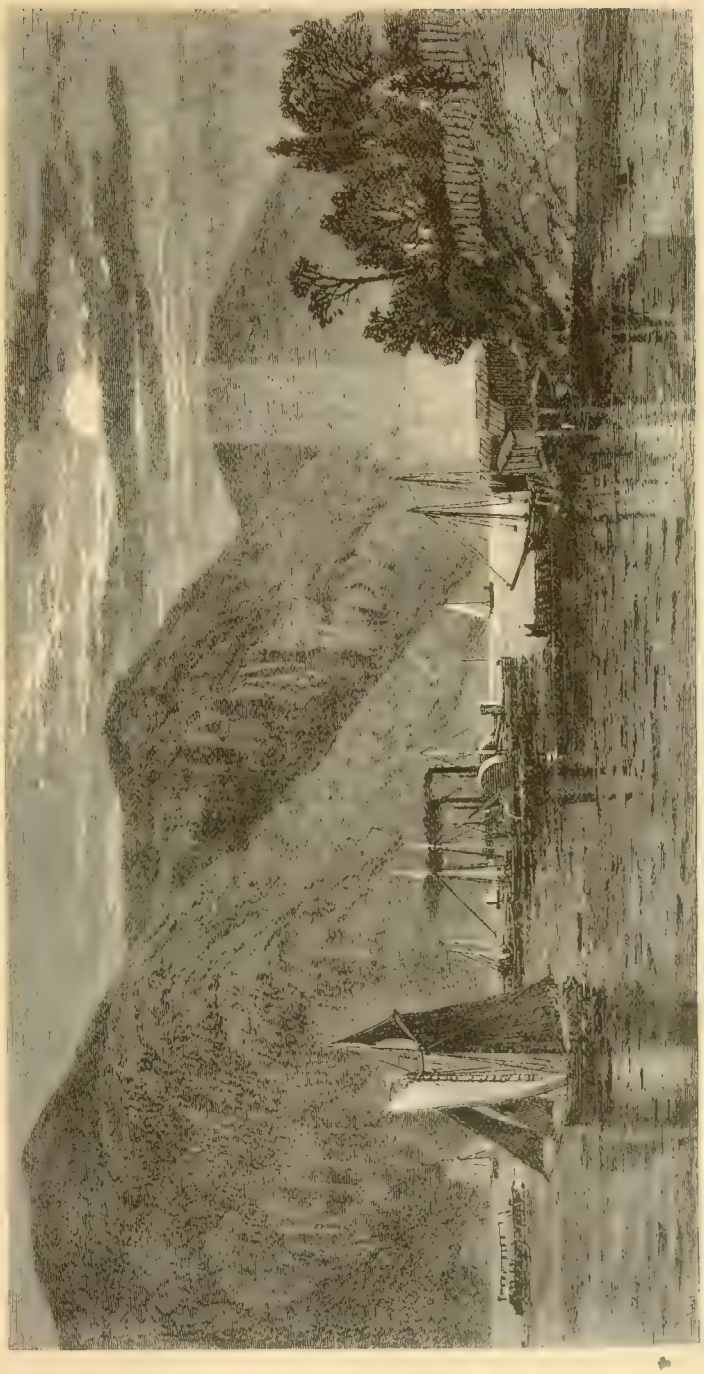
The story is simple in construction, but full of the most quaint and graceful fancy. The fairies who live on Cro'nest are called together at midnight to sit in judgment on one of their number who had broken his vow. He is sentenced to perform a most difficult task, and all the evil spirits of land and water oppose him in the performance of his penance. He is sadly baffled and tempted, but at length conquers all difficulties, and his triumphant return is hailed with dance and song.

These Cro'nest fairies are a dainty and luxurious race. Their lanterns are owlets' eyes. Some of them repose in cobweb hammocks, swung on tufted spears of grass, and rocked by the zephyrs of a midsummer night. Others have beds of lichen, pillowed by the breast-plumes of the humming-bird. A few, still more luxurious, find couches in the purple shade of the four-o'clock, or in the little niches of rock lined with dazzling mica. Their tables, at which they drink dew from the buttercups, are velvet-like mushrooms, and the king's throne is of sassafras and spice-wood, with tortoise-shell pillars, and crimson tulip-leaves for drapery. "But the quaint shifts and the beautiful outfit of the Culprit him-



Under the Cliff of Cro'nest.

self," says a writer on Drake, "comprise the most delectable imagery of the poem. He is worn out with fatigue and chagrin at the very commencement of his journey, and therefore makes captive a spotted toad, by way of a steed. Having bridled her with a silk-weed twist, his progress is made rapid by dint of lashing her sides with an osier-thong. Arrived at the beach, he launches fearlessly upon the tide, for among his other accomplishments the Fay is a graceful swimmer; but his tender limbs are so bruised by leeches, star-fish, and other watery enemies, that he is soon driven back.



Cro'nest and Storm-King Mountains, from Cold Spring.

"The cobweb lint and balsam dew of sorrel and henbane speedily relieve the little penitent's wounds, and, having refreshed himself with the juice of the calamus-root, he returns to the shore, and selects a neatly shaped mussel-shell, brilliantly painted without and tinged with a pearl within. Nature seemed to have formed it expressly for a fairy-boat. Having notched the stern, and gathered a colen-bell to bail with, he sculls into the middle of the river, laughing at his old foes as they grin and chatter around his way. There, in the sweet moonlight, he sits until



The Highlands, from Cornwall.

a sturgeon comes by, and leaps, all glistening, into the silvery atmosphere; then, balancing his delicate frame upon one foot, like a Liliputian Mercury, he lifts the flowery cup, and catches the one sparkling drop that is to wash the stain from his wing.

"Gay is his return-voyage. Sweet nymphs clasp the boat's side with their tiny hands and cheerily urge it onward.

"His next enterprise is of a more knightly species, and he proceeds to array himself accordingly, as becomes a fairy cavalier. His acorn helmet is plumed with thistle-down, a bee's-nest forms his corselet, and his cloak is of butterfly's wings. With a lady-bug's shell for a shield, and a wasp-sting lance, spurs of cockle-seed, a bow made of vine-twig strung with maize-silk, and well supplied with nettle-shafts, he mounts his fire-fly and, waving his blade of blue grass, speeds upward to catch a glimmering spark from some flying meteor. Again the spirits of evil are let loose upon him, and the upper elements are not more friendly than those below. A sylphid queen enchants him by her beauty and kindness. But, though she played very archly with the butterfly cloak, and handled the tassel of his blade while he revealed to her pitying ear the dangers he had passed, the memory of his first love and the object of his pilgrimage kept his heart free.

Escorted with great honor by the sylph's lovely train, his career is resumed, and his flame-wood lamp at length rekindled, and, before the sentry-elf proclaims a streak in the eastern sky, the Culprit has been welcomed to all his original glory."

Turning the corner of the Storm King, the traveler's eye falls on an elevated reach of table-land stretching from the shores of Newburg Bay to the base of the western hills. On the range of this terrace, near the southern extremity, is the many-gabled cottage of Idlewild, once the home of N. P. Willis, the Beau Brummel of American letters.

"My cottage," Willis wrote, "is a pretty type of the two lives which they live who are wise—the life in full view, which the world thinks all, and the life out of sight, of which the world knows naught. You see its front porch from the thronged thoroughfare of the Hudson; but the grove behind it overhangs a deep-down glen, tracked out by my own tangled paths and the wild torrents which they by turns avoid and follow—a solitude in which the hourly hundreds of swift travelers who pass within echo-distance effect not the stirring of a leaf. But it does not take precipices and groves to make these close remotenesses. The city has many a one—many a wall on the crowded street, behind which is the small chamber of a life, lived utterly apart. Idlewild, with its viewless other side hidden from the thronged Hudson, its dark glen of rocks and woods, and the murmur of its brook, is but an example of every wise man's inner life illustrated and set to music."

Mr. Willis made vagabond and tourist alike welcome to the liberty of his grounds. He was wont to say: "To fence out a genial eye from any corner of the earth which Nature has lovingly touched with that pencil which never repeats itself; to shut up a glen or a water-fall for one man's exclusive knowing and enjoying; to lock up trees and glades, shady paths and haunts along rivulets—it would be an embezzlement by one man of Nature's gifts to all. A capitalist might as well cut off a star, or have the monopoly of an hour. Doors may lock, but out-doors is a freehold to feet and eyes."

On Newburg Bay, which opens its wide expanse as the steamboat rounds the base of the Storm King, is the charming village of Cornwall, crowded with hotels and summer cottages, built apparently one over the other on the slope of a hill named Island Terrace by N. P. Willis. Here the Moodna, a brawling stream, sparkling from its dash down the hills, pours into the Hudson. It was once named Murderer's Creek, in memory of a savage Indian massacre. Four miles north stands the thriving city of Newburg, which is built on a hill-side with terraced streets. The river-front is lined with capacious docks, where lie a fleet of sloops, schooners, and canal-boats. Many of the streets are sheltered by shade-trees, and the houses embowered in shrubbery. The house in this city where Washington had his headquarters was the scene of important events toward the close of the Revolutionary War, and is now a museum of numerous interesting relics. The central room of the old gray mansion is a quaint old place, with antique chairs and tables and a famous fire-place with glistening brass andirons, on which in the old days the pine crackled and blazed in a royal way, while

the great commander of the Continental forces sat with outstretched feet, meditating on the battles which decided the fate of the country. Above Newburg Bay, the river narrows, and the banks are high, though not precipitous. Soon the boat approaches the city of Poughkeepsie, seventy-five miles from New York. Below it is the village of Milton Ferry, where lived the patriotic blacksmith who forged the iron links of the



The Highlands, south from Newburg.

chain that stretched across the river at Fort Montgomery. This service to his country he afterward expiated in the British prison-ships. Poughkeepsie was an old Dutch town, settled at the close of the seventeenth century. It is now widely known, though otherwise a prosperous place, as the seat of the celebrated women's college founded by Matthew Vassar, at which three hundred and fifty women receive an excellent collegiate training. The college buildings cover an area of fifty thousand square feet,

and the park in which they are set, originally made picturesque and romantic by Nature, has been further adorned at great expense and with excellent taste. A short distance beyond this thriving city a first glimpse is caught of the Catskill Mountains, whose blue peaks silhouette the horizon on the northwest, and for thirty miles an almost continuous panorama of mountain scenery, to which distance lends a peculiar enchantment, may be enjoyed.

The Catskills, which now lend their peculiar charm to the river, form the termination of a ridge of the Appalachian chain which enters the State from Pennsylvania and extends through Sullivan, Ulster, and Greene Counties. They rise abruptly on their eastern side, and are ascended by a winding road at the edge of a deep glen, near the head of which is an amphitheatre, inclosed by lofty ridges, where Rip Van Winkle fell into his long sleep. This legend has been made familiar wherever the English language is spoken by Irving's exquisite fancy and Jefferson's acting, and the fate of the village ne'er-do-well constitutes an episode of fancy most delicious to every

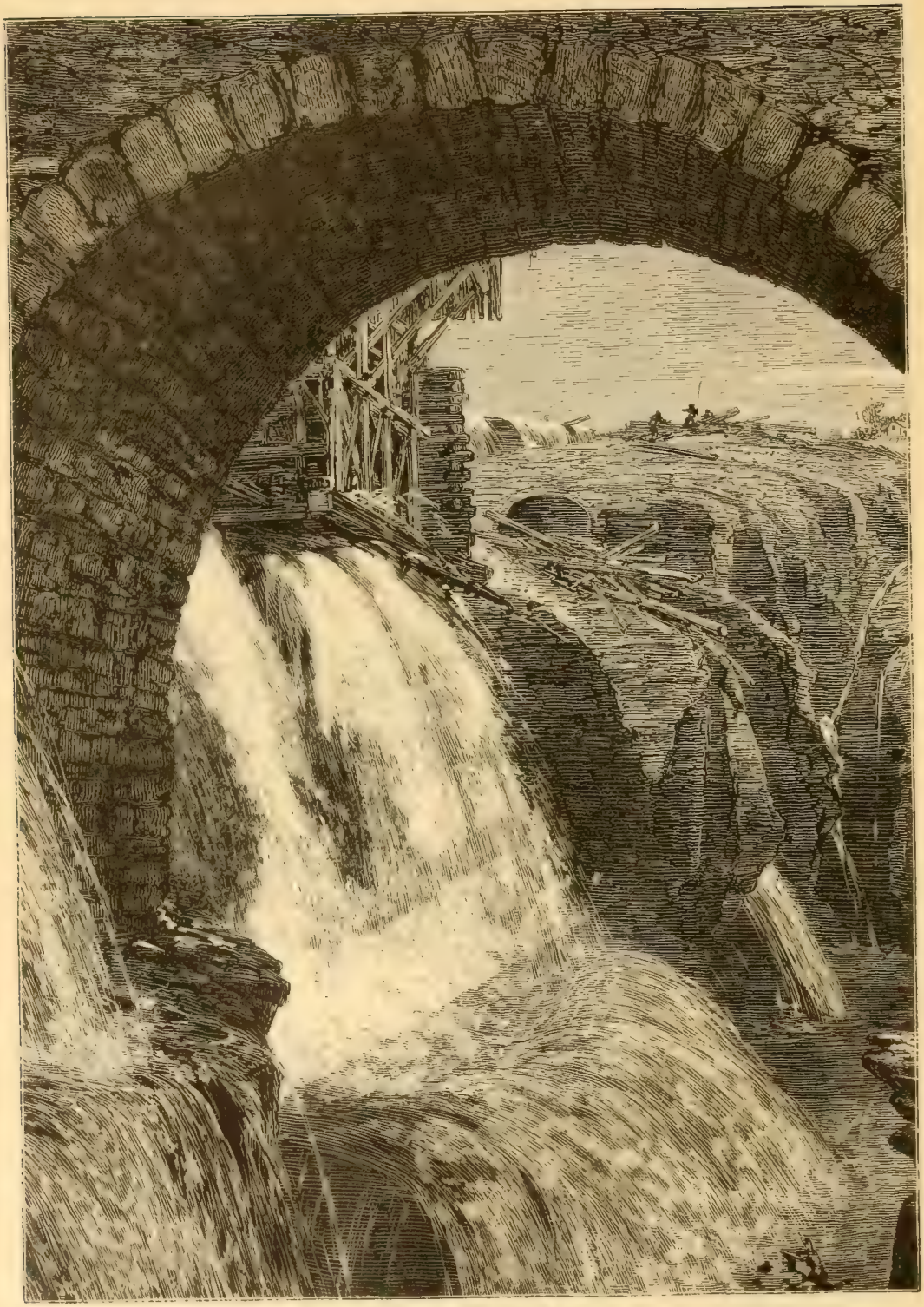


Catskill Mountains, from Tivoli.

one's sense of humor. Catskill Landing is one hundred and eleven miles from New York, on the western shore. The Catskill River enters the Hudson near by, rushing between rocky bluffs in a deep channel, which close to its mouth is navigable for large vessels. Here Henry Hudson anchored the Half Moon on the 29th of September, 1609, and was visited by the Indians.

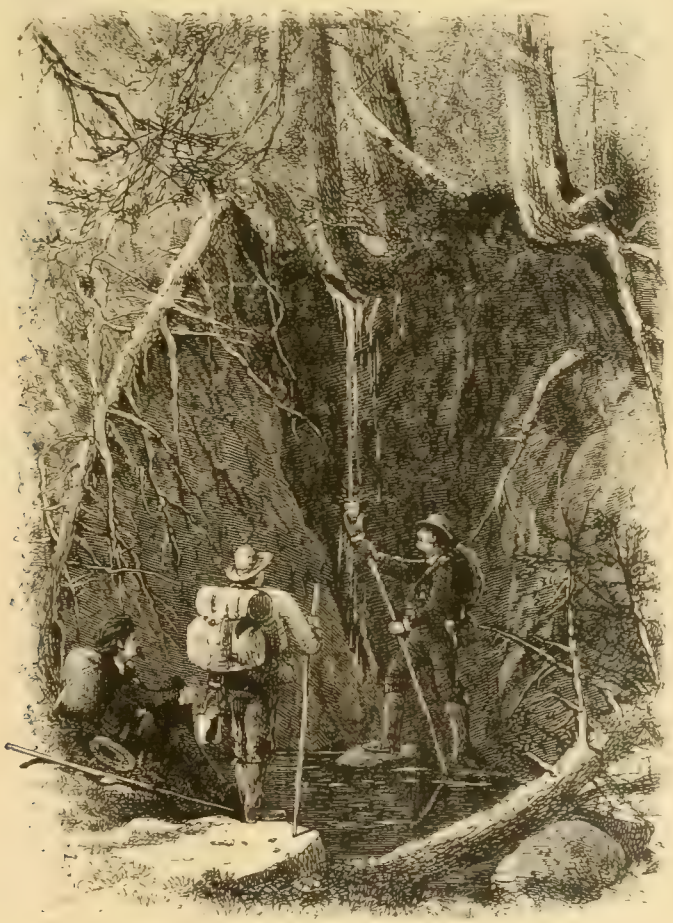
Beyond the city of Hudson the scenery is not striking, and nothing demands attention until the steeple-crowned heights of Albany break on the eye, one hundred and forty-five miles from New York city. So ends a river-voyage which, taken for all in all, has but few rivals in the varied delights with which it feasts the love of the beautiful and picturesque.

At Troy, six miles above Albany, tide-water ceases, and beyond this the river is a rapid, rocky stream, navigable only for small craft. At Glens Falls, fifty miles from Albany, on the way to Lake George, the tourist may again see the Hudson in one of its most picturesque phases, where, as in a brawling mountain-torrent, it rushes in a series of tumultuous rapids and cascades down eighty feet of stony and precipitous



The Hudson at Glens Falls.

descent. Glens Falls will recall to the memory of the admirer of Cooper one of the most exciting adventures in the novel of "The Last of the Mohicans." By leaving far behind him the more civilized appliances of travel, the tourist may penetrate to the heart of the Adirondacks, where, in the great gorge known as the Indian Pass, in whose cold depths the ice of winter never entirely melts, he will reach a crystal spring whose waters plash softly over its pebbly bottom. Here he will find the source of the Hudson—at one end a lonely mountain-brook, where the wolf, the deer, the panther, and the bear quench their thirst; at the other, three hundred miles away, a magnificent city, one of the imperial centers of the world's wealth and civilization. From one extreme to the other the traveler may pass in little more than forty-eight hours. Such is the Hudson, a noble stream, bearing on its silvery bosom the commerce of a continent, and set in such a superb frame of beautiful scenery as to make it world-famous. History and legend have contributed, too, to invest its hills and forests with the mellow perspective of fancy, and people its lovely slopes and frowning cliffs with the most fascinating associations. To him who makes his first journey on these waters, the excursion will remain as one of the pleasant events of his life.



Source of the Hudson.

SCENERY OF THE PACIFIC RAILWAYS.

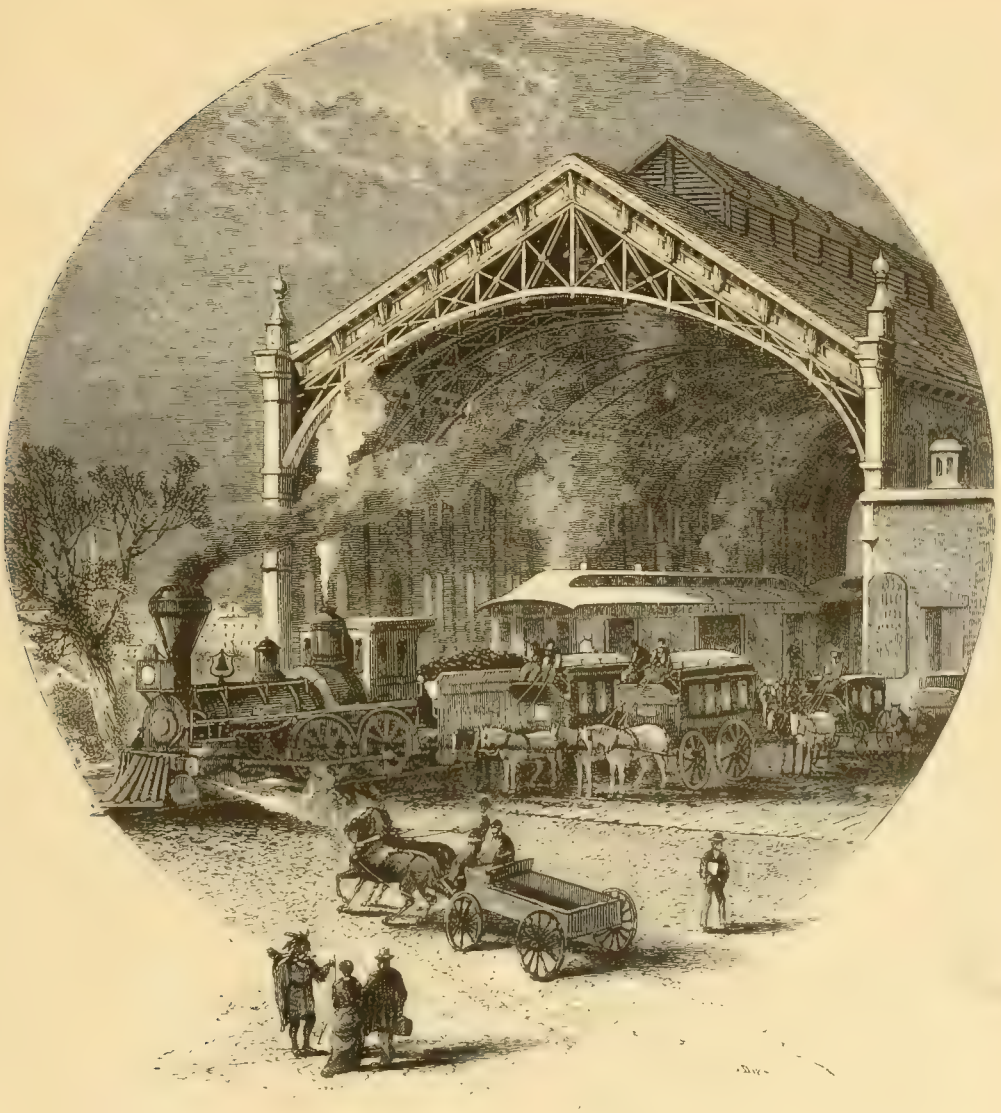
PART I.

OMAHA TO OGDEN.

The noblest scenery of the West adjacent the great transcontinental lines—A bird's-eye view of some of the greatest natural wonders of the world—The former sufferings of emigrants over a long and dreary trail—The present luxury of travel over the same route—Omaha, the eastern terminus of the Union Pacific—The first glimpse of the Western Plains—Cheyenne and its surroundings—A typical Western town in its growth—The Black Hills—The Great Laramie Plains—Twilight in the desert—Incidents of railway-travel—The great dividing ridge of the continent—The wonderful color and shapes of the rocks—The marvels of Red Cañon—Green River—The Uintah Mountains—Gilbert's Peak—Hayden's Cathedral—The wonderful church—Buttes of Wyoming—The borders of Utah—Utah the home of much of the noblest Western scenery—A desert turned into a garden by irrigation—Early Mormon life—Echo Cañon and its great precipices—Weber Cañon—Lofty walls of rock painted by Nature in the richest colors and carved in every variety of shape—All this region once a grand internal ocean—The Thousand-Mile Tree and the Devil's Slide—The Devil's Gate and Ogden Cañon.

Much of the noblest scenery of the West lies adjacent to the tracks of the Pacific Railways, and the tourist in search of the beautiful has within easy reach of his vision, from the almost interminable bands of iron which complete the links binding the Pacific to the Atlantic, such views of the sublime and picturesque in Nature as may satisfy the passion of the most curious and eager of sight-seers. The sage-plains of Colorado and New Mexico are repeated wearisomely between Omaha and Cheyenne, and in the great Humboldt Desert; the miraculous *mesas*, or table-lands, of the Black Hills and the Yellowstone, with their broadly defined strata of crude color, have their counterparts on the borders of Green River; the fantastic erosions of sandstones that have made the Monument Park of Colorado famous, crop out on the line so frequently that they cease to excite any wonder; and the grandeur of the abrupt cañons that cleave the heart of the main Rocky range may be judged from the sheer walls and purple chasms of Echo, Weber, and the American River Cañons.

The first revelation of the mountains is inspiring, indeed, and one is conscious of a thrill of excitement as the solemn line of peaks slowly rises above the sharp horizon with its patches of intensely white snow, that glitter with rainbow-hues in the sunshine. A stranger marvels when he is told how distant and immensely high the nearest of the pinnacles is, and that from one of them a hundred and fifty others, each over twelve thousand feet high, can be seen. Yet they seem to be neither very high nor very far off. No mountains in this land of lucid skies ever do, and it is



The Union Pacific Depot at Omaha.

only by reference to experience that we can convince ourselves of their truly great altitude. As we continue to look at them—the hollows holding pools of blue haze—and the innumerable intermediate ridges become visible, it dawns upon us by degrees how vast they are.

The desert between Ogden and Truckee is duller than that between Omaha and Cheyenne—duller than Sahara itself—a sterile basin locked in by sterile mountains, and overcast by the brooding despondency of a wintry sea. Who, left to himself, is proof against *ennui* here? Who is not affected, more or less, by the sadness and stillness of the purple mountains? It is a fortunate thing that the length of the

journey admits of a degree of intimacy between the passengers, and that the outward ugliness may be forgotten in social intercourse. A great river is sucked into the thirsty sand, and all Nature shows a resolute opposition to fertility.

One of the curious rocks of Green River, Echo, or Weber Cañon, set up in England, or any part of Europe, would make a popular resort; but strange geological developments are multiplied indefinitely along the line of the Pacific Railways—and we soon learn that the mere oddities of creation have no lasting charm. In these cañons, however, there is superlative grandeur, both in the enormous bluffs a thousand or more feet high, and in the barriers of rock that would seem impenetrable were it not for the positive evidence of the long tunnels, cuttings, and bridges. Probably this is the grandest railway scenery in the world, and it certainly is among the grandest scenery of the American Continent. From the yellow-green plains we are borne down a steep slope into the very heart of the Wahsatch Mountains; through a red-walled ravine, by a frothing mountain-stream, among wind- and water-worn miracles of sandstone and granite, and out into the beautiful valley of the Great Salt Lake, as the warm haze of sunset is mellowing the circling peaks and flooding the gardens of Ogden with its gold. Whatever the territory may be beyond the belt of Utah traversed by the Union Pacific Railway, it is the best-looking agricultural region between Iowa and California. Yellow hay-ricks, waving fields of corn and wheat, and plethoric orchards, make a most grateful relief to the wonder-land of rocks through which the traveler has come; but they are soon passed, and the train whirls out from Ogden into a white alkali plain bordering the Salt Lake. The next day's journey is the most wearisome of all. The Humboldt Desert throws up a stifling cloud of dust, and the few little sandy stations are the only evidences of civilization; and these stopping-places, aside from the needs of the railroad, apparently only serve to supply a few beastly and besotted-looking vagrants the means to get drunk on wretched whisky. During the following evening and night the passenger crosses the Sierras, and on the next day, the last of the journey, makes the passage of the American Cañon, Cape Horn, and the fertile valley of the Sacramento. Such in epitome is the ground over which the reader is invited to accompany us in a trip across the continent, which, now accomplished in four days from Omaha to San Francisco, was not many years ago a desperate undertaking of such difficulty, exposure, peril, and hardship, that even the hardiest recoiled from it with a feeling of dread. The sufferings of overland emigrants, in the days when this arduous journey was made with ox-teams, were almost beyond conception. The bones of hundreds of poor wretches, who starved or thirsted to death, or were massacred by the Indians or the then equally savage Mormons, lie bleaching along this whole track of death and despair. The stories of heroic daring and adventure, of patient suffering and persevering toil, which fill the record of the progress of that vanguard of civilization who crossed the Western Plains in emigrant-caravans, make up a fascinating narrative, though sad in its constantly recurring episodes of struggle against Indian butchery and the still more insidious perils of hunger and thirst. What a contrast

does to-day furnish! The luxurious traveler is whirled along at the rate of thirty miles an hour in richly furnished palace-coaches, and he has hardly time to fairly enjoy the passing glances at the magnificent scenery when he finds himself in the metropolis of the Pacific coast.

Omaha, at which point we start on our long journey, is a prosperous city of more than twenty thousand population, an increase of seventy-five per cent in ten years. It is on the western side of the Missouri River, which is spanned by a bridge twenty-seven hundred and fifty feet long, and its principal industries are in breweries, distilleries, brick-yards, smelting and refining works. The Union Pacific depot is a handsome structure, that was built a few years ago. It contains every convenience for the traveler, including waiting-rooms, restaurants, a money-exchange, and ticket-offices. The scene of the departure and arrival of the transcontinental train is of the liveliest kind. There is a mingling of many races and many costumes. Sleeping-car porters and conductors, brakesmen, news-agents, railway-police, emigrants, soldiers, plainsmen, fashionable tourists, commercial travelers, and occasional Indians, give spice and variety to the throng, and towns-people crowd in to share the excitement. But the consequences of the confusion are helped by the admirable system for the rechecking of baggage, etc., and the intelligence of the railway attendants. The least experienced of travelers is sure to find himself comfortably seated when the train starts, leaving the city behind and entering the rich farm-lands of Nebraska without a care, as far as the journey is concerned, on his mind.

The verdant farm-lands are soon succeeded, however, by the plains, the monotony of which is excessive. Billow follows billow of land into the uncertain gray of the horizon, speckled with rings and tufts of faint green, and jeweled with little patches of wild-verbena. On the dreariest day at sea the tossing of the waves gives an exhilarating sense of motion, and the eye is gratified by the prismatic flashings of sunbeams among the spray. On the plains the hilly waves are repeated, but they are paralyzed and dumb, and communicative of blight only. The prevailing color is a greenish yellow; the sense touched is that of vacancy. Occasionally the land seems to sink into a basin surrounded by hogsheads, a form of rock which presents a steep and rough escarpment on one side, and on the other slopes off by easy gradations to the level. But there is no great elevation, and the spectator rather gets the idea of contraction than of immensity. At intervals of twenty or thirty miles a red tank with a creaking windmill marks a water-station, at which the passengers alight to gather prairie-flowers; and still farther apart some little white towns, with names reminiscent of frontier-life, tell a story to which the copper-skinned, dirty mendicants, crowding the stations, are a fitting pendant. In some places wagon-trains of emigrants may be even yet seen toiling along in their dusty route not far from the track, though now under conditions of far less peril than of yore.

At Omaha the elevation is nine hundred and sixty-six feet above the sea. At Cheyenne, a distance of five hundred and sixteen miles, the elevation is six thousand and forty-one feet. The peculiarity of the Rocky Mountains is, that they rise in a

gradually ascending plateau for this distance so gently that the traveler is hardly conscious of the change except by the difference in the temperature till he reaches Hillsdale, twenty miles east of Cheyenne, when he catches a glimpse of the Rocky Mountains proper, and at Cheyenne they have so far loomed upon the horizon as to form a massive background to the landscape. Between Omaha and Cheyenne we are carried through sixty-eight stations which have but little to recommend them to the notice of the traveler. Nearly all these stopping-places have the same characteristics. They have been of rapid growth, and vary in population from several thousands to a score or less. Between them the plains rise and fall monotonously, keeping the traveler's interest only half awake by prairie-dog villages and herds of antelope. The North Platte River only breaks the sameness. Buffaloes have long since disappeared from the vicinity of the tracks, and the passengers rejoice when the undulations are broken by the first glimpse of the Rocky Mountains. The train passes under snow-

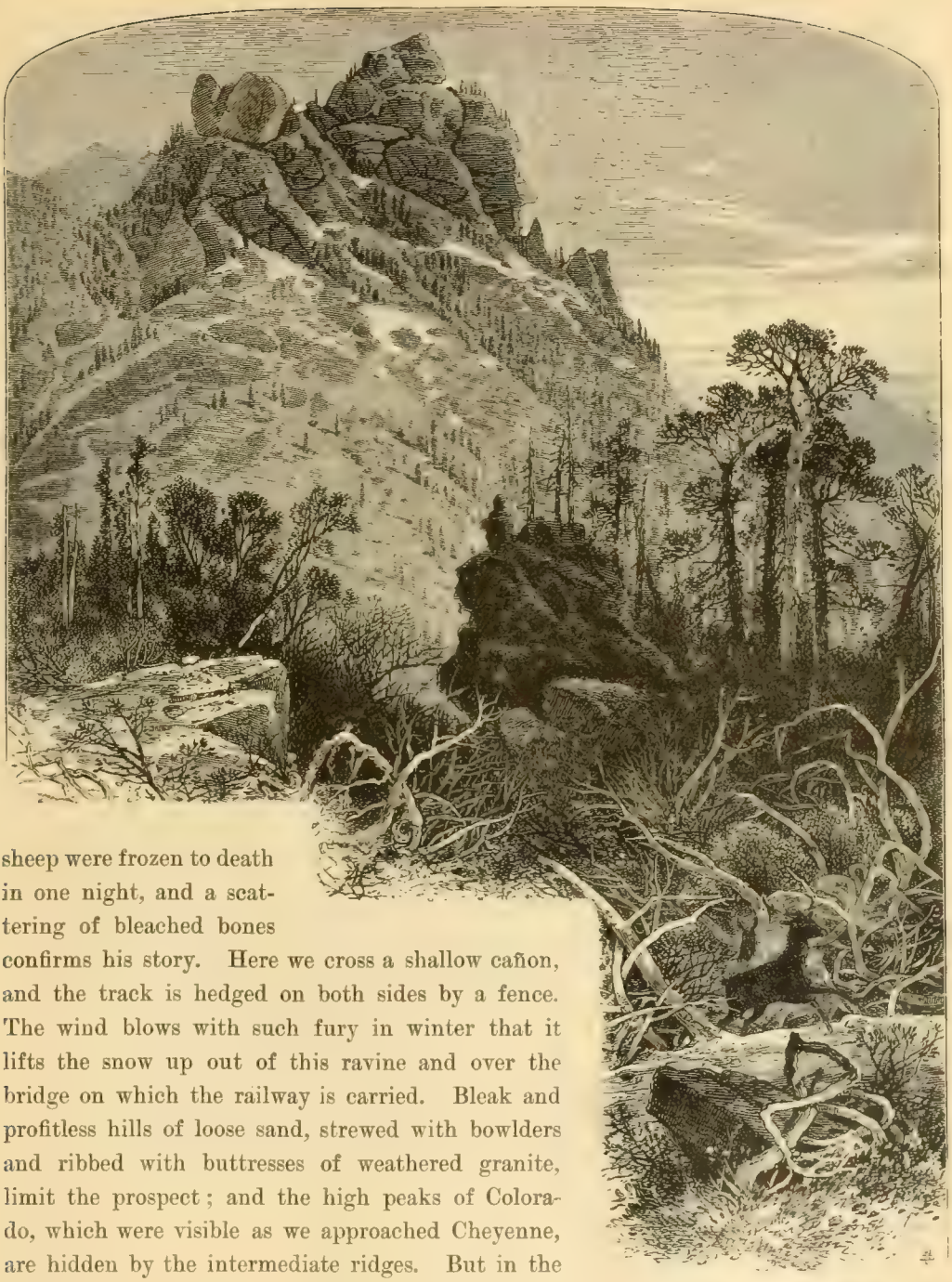


The Platte River, near North Platte.

sheds and between snow-fences, and presently stops at Cheyenne, where the Denver branch of the Kansas Pacific Railway connects with the Union Pacific, affording tourists a chance to visit every noted place in Colorado.

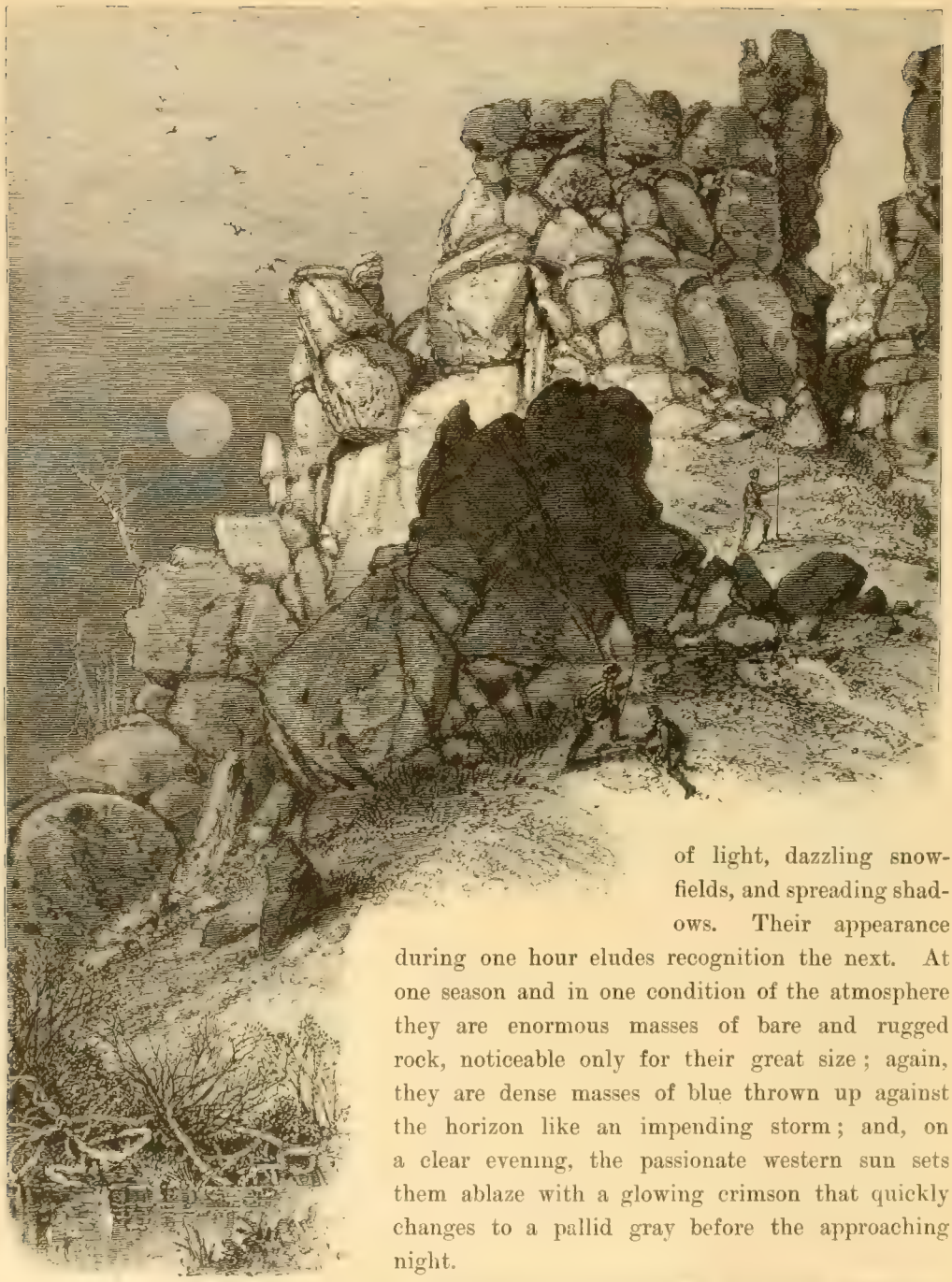
Cheyenne is only fourteen years old, the first house having been built in 1867. A month afterward building-lots were sold for one hundred and fifty dollars, and three months from that time resold for twenty times that amount. The air now resounds with the click of the hammer and the tap of the trowel, and the first wooden buildings are rapidly giving way to structures of brick and stone. The car-shops of the Union Pacific road are located here, an industry of considerable importance to the place.

After leaving Cheyenne the snow-fences and snow-sheds become more frequent, indicating how terrible the winter storms are. A plaintive look of fear may be seen on the faces of the immigrants in the forward cars, and an occasional mutter is heard. A stock-raiser points out an ominous little valley in which several thousand



Black Hills, near Sherman.

sheep were frozen to death in one night, and a scattering of bleached bones confirms his story. Here we cross a shallow cañon, and the track is hedged on both sides by a fence. The wind blows with such fury in winter that it lifts the snow up out of this ravine and over the bridge on which the railway is carried. Bleak and profitless hills of loose sand, strewed with bowlders and ribbed with buttresses of weathered granite, limit the prospect; and the high peaks of Colorado, which were visible as we approached Cheyenne, are hidden by the intermediate ridges. But in the neighborhood of Sherman, thirty-three miles from Cheyenne, these superb mountains reappear, stretching a hundred miles or more to the southward, bathed in white vapor near the summits, profoundly blue as they slope down to the foot-hills, checkered with broad streaks



Maiden's Slide, Dale Creek.

of light, dazzling snow-fields, and spreading shadows. Their appearance during one hour eludes recognition the next. At one season and in one condition of the atmosphere they are enormous masses of bare and rugged rock, noticeable only for their great size; again, they are dense masses of blue thrown up against the horizon like an impending storm; and, on a clear evening, the passionate western sun sets them ablaze with a glowing crimson that quickly changes to a pallid gray before the approaching night.

The Black Hills that we are gently ascending, and that extend into the north, have little or no poetic charm. They are insignificant in height and dull in color. A few stout pines and firs, dwarfed by the inclemency of the weather, struggle out of the crev-

ices between detached masses of tempestuous rock, and these are the only touches of vegetation that can be discovered.

We now arrive at a station which has a height of somewhat more than eight thousand feet above the sea. Sherman is said to be one of the highest railway-stations in the world, but so gradually do we ascend that it is difficult to realize the

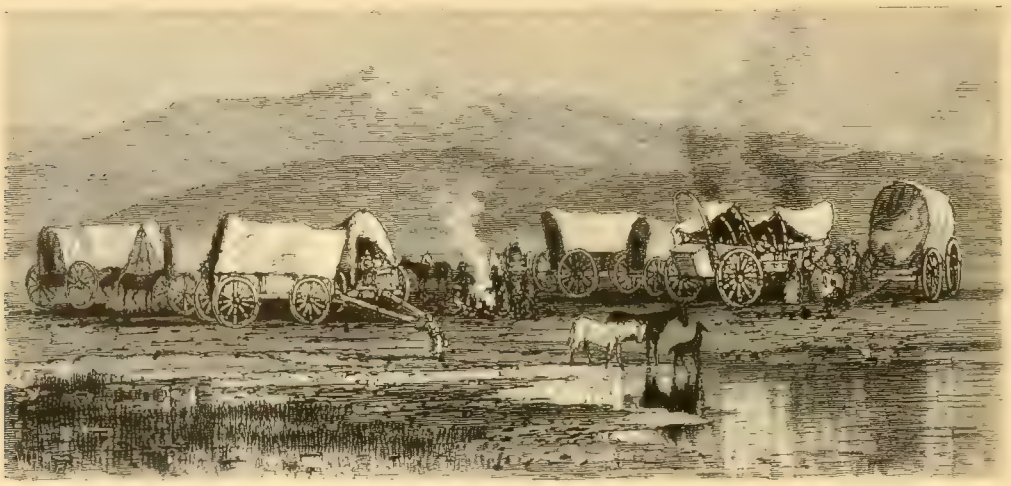


Red Buttes, Laramie Plains.

fact. From this point to the Laramie Plains the traveler is carried through an amazing region of rock *diablerie*, where the granite and sandstones are cast in such odd shapes that they seem to be the work of goblin architects or the embodiment of a madman's fancy. Pillars which caricature the forms of man and beast; circular and square towers that might have been parts of a mediæval stronghold; massive

structures that have no small resemblance to the fortress itself; and absurd shapes unlike anything seen on earth or heard of in heaven, barricade the track on both sides. Sometimes these are honey-combed with tiny cells like worm-eaten wood; sometimes they are yellow-ochre in color or pale green; and again they are a vivid crimson, or the several strata are marked with different tints. In Dale Creek Cañon, only two miles from Sherman, the railway crosses by a long trestle-work bridge one hundred and twenty-seven feet high. Here, among other rock-wonders, is a great pile called, for some strange reason, the Maiden's Slide, and another pile bears the ghastly name of Skull Rocks, from its curious resemblance. The Red Buttes, at the western end of the bridge, are queer rock statues, misshapen and grotesque, and crimson in color.

The great Laramie Plains, which we are now about to cross, are some forty miles wide and a hundred miles long, between the Black Hills and Medicine Bow Mount-



Emigrants' Camp, Laramie Plains.

ains. They furnish the best grazing in the United States, and they are overrun by enormous flocks of sheep, who find here the most juicy and fattening grasses. Sheep-herding is the great industry of this region, and some large fortunes have been made by the ranchmen of the Laramie Plains. We find the immigrant trail following the railway closely through this part of the route. Canvas-covered wagons drawn by ox-teams are often passed, sometimes alone, sometimes in a train. The whole establishment of a migrating family—men, women, and children, furniture, cattle, and pets—is included in the caravan; and in the evening it is not uncommon to see the wanderers drawn up by the side of a spring or brook for the night—the women busy over the camp-fire, and the men attending to the cattle or smoking under the shelter of the wagons. The Indian wigwams, which in the early days of the railway might have been seen clustered along the track or close on the outskirts of the newly settled towns, have now disappeared, and the filthy, copper-hued vagabond who once

begged pennies at the stations is now nearly as scarce as the buffalo that once blackened these plains with their swarms.

Arriving at Laramie City, which is on the river of the same name, we find a well-built place of about three thousand people, and adorned with fine public and private buildings. Rich deposits of antimony, cinnabar, gold, silver, lead, plumbago, and other minerals are found within thirty miles of the city, and it has all the aspects of an active mining-town, as the miners come here to get their stores and spend their money. Between the miners and the cow-boys, or ranchmen, there are times when Laramie City is like a pandemonium with its drunken, fighting desperadoes, and even the presence of the troops at Fort Landers, near by, seems to have but little influence at the times of these periodic "sprees." Looking west from the city, we see Elk Mountain, one of the Medicine Bow range, rising 7,152 feet above the sea.

Soon after passing Laramie, and while we are still rolling over the fertile plains, the night sweeps up from the east in a smoky-looking cloud and overtakes the speeding train; but, before the relapse of light into final darkness, there is the brief glory of the western sunset, with its splendors of crimson and gold, its dying gleams of opal light, and peaceful blues and grays. No ugliness can assert itself in this parting look of the day. The mean little dug-out and the low hovel of the mines are redeemed from their squalor and unshapeliness, and changed until they become pleasant to the sight. The low-lying plain and the swampy stream meandering it borrow color from the expiring light: the plain is a red-brown, and the river is overcast with a skim of brassy yellow. The distant mountains are folded in a wonderful blue or purple—which it is we can scarcely tell—and every bend and peak in their summit-line is lit up with startling distinctness. The clattering train does not break the spell of silence and loneliness that settles with twilight on the land, though it suggests civilization and the fast-beating pulse of commerce; on the contrary, it adds weirdness to the scene as it twists among the hillocks, disappearing under a snow-shed for a minute, and reappearing with a roar and a blaze. It is like a ship adrift at sea: whence it has come is only indicated by the clogging wreath of smoke that hangs low upon the earth behind it, and its destination is unforeshadowed by the gleam of a human habitation in the dusk ahead. At this time the work of the railway company in projecting an iron pathway into so wild and desolate a region impresses us as it has not impressed us before.

We pass from stretch to stretch of plain, bounded by the same whited peaks, and not different in any important particular from the stretch before it. The telegraph-poles are the only projections nearer than the mountains, and a flock of birds, or sheep, or a herd of cattle in the neighborhood of a roughly timbered ranch, is the only reward of the patient tourist, who sits in pensive martyrdom at the car-window with a praiseworthy but foolish resolve to comprehend the whole country. The wheels of the train beat their humdrum on the iron rails: the novel is again taken up; and the game of whist, euchre, or casino is resumed, as the passenger gives up the task of sight-seeing in despair.

Travelers who are thrown together in this long railway trip soon become as sociable as if they had known each other all their lives, and the most oddly dissimilar people strike up hearty friendships that last for a life-time afterward. We meet tourists from all parts of the world, who become jolly companions at once. That well-



Elk Mountain.

bred, quiet-looking man in gray tweed we find to be an English earl, though it is a good while before the fact comes out, and then in a merely chance way. He is as pleasant and affable as a commercial drummer, and far better mannered. The hale, blunt, stout man in the opposite seat is a Kent or Hampshire farmer from the old country, who, with his wife and daughter, that bloom like two dahlias, is taking the holiday of a life-time; and, though as English as the Tower of London, he wonders that any one should take him to be a John Bull. His praise and blame of

what he sees are divided between the depth of the soil and the impudence of the charges at the eating-houses on the route. The round-faced man in spectacles is a German professor, who has come from some great university-town in Hanover or Prussia to see with his own eyes the wonders of the Western world; and sitting in the same seat with him is a lean, dark-skinned Frenchman, who perhaps fought against him at Gravelotte or Sedan. So we make ourselves acquainted with people of nearly every country in Europe as we are whirled along on the apparently endless iron track.

Occasionally some episode will attract the attention of the travelers. The engine enters a narrow valley and startles a herd of deer drinking on the banks of a rivulet. Frightened at the apparition of the thundering iron horse, the timid creatures flee with their utmost speed. The engineer



Banks of the Platte River.

blows his whistle and opens the throttle-valve farther. The deer, still further alarmed, leap still faster in the race until they reach the open country, when they spring to one side beyond rifle-range and gaze with dilated eyes at their fast-disappearing enemy. These races between deer or antelope and the Pacific trains were once quite common, but the timid animals now for the most part avoid the vicinity of the railway-track.

At Fort Fred Steele, a little less than seven hundred miles west of Omaha, the passengers, if they are still awake (for it is probably midnight when the train arrives), may see flowing near the banks of the railroad the broad waters of the Platte River, clear, deep, and unsullied, as it is at its source among the perpetual snows of Long's Peak in the North Park of Colorado. Every military post which we pass, even if it be a mere shed for the troops, with a store-house of supplies, is governed with the strictest discipline. The *reveille* is beaten and the guard mounted with the same un-



View on the Platte River.

failing precision as at Governor's Island, New York, or San Francisco, and both officers and men are as careful and neat in their dress as a regiment marshaled for review before the commander-in-chief.

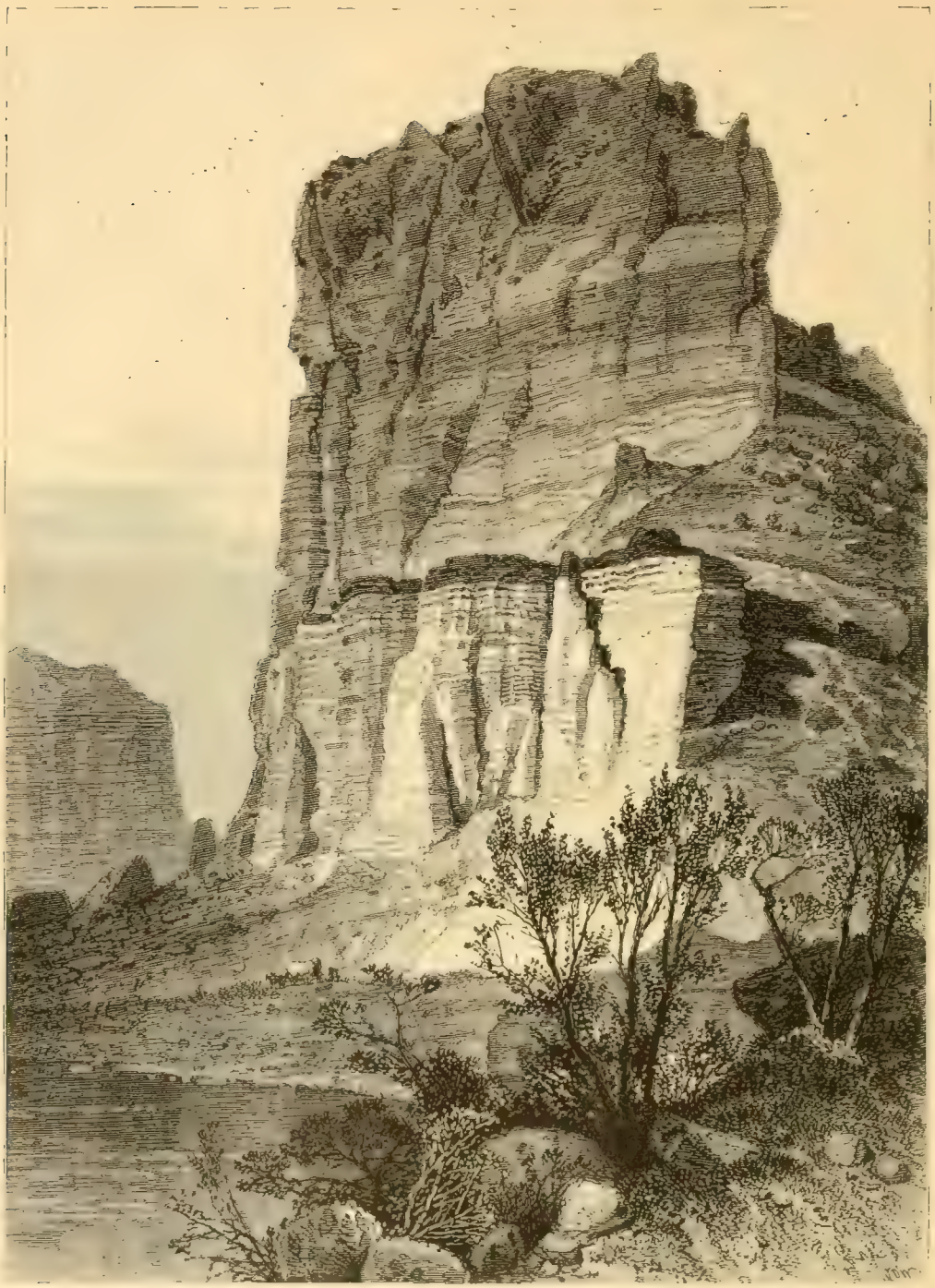
About forty miles west of Fort Fred Steele is the divide, which turns one part of the water of the continent into the Atlantic and the other part into the Pacific. But this ridge-pole of the North American Continent is so unimpressive in appearance and in actual height—being less than seven thousand feet above the sea-level—that no one would suspect the interesting fact.

We pass through scenes monotonous and utterly lacking in anything to please the eye or stir the fancy till we arrive at Green River, which is eight hundred and forty-six miles from Omaha. The river, which receives its name from the color of the strata of earth through which it passes, rises in the Wyoming and Wind River Mountains, and flows south till it joins with the Grand to make the Colorado. The scenery is marked by very quaint and beautiful sandstone cliffs which crop out close to the railway. These are called by scientific men the Green River Shales, the sediment being arranged in different layers, from the thickness of a knife-blade to several feet.



Giant's Butte, Green River.

The castellated cliff and the Giant's Butte, which are shown in the illustrations, are landmarks that strike the eye of every tourist. The broad and well-defined bands



Cliffs, Green River.

of color, looking as though they had been applied by a painter's brush; the countless spires and turrets eroded in the front of the main rock; and the grotesque element

that finds expression in a hundred inconceivable and indescribable shapes, force us to believe that we have left earth behind, and have strayed into goblin-land.

Beautiful impressions of fish are seen on the shales, sometimes a dozen or more within the compass of a square foot. The molds of insects and water-plants are also found, and occasionally a greater wonder still, such as the feather of a bird, can be traced in the heart of a rock several hundred feet high.

At Flaming Gorge the water is of the purest emerald, with banks and sand-bars of glistening white, and it is overlooked by a perpendicular bluff, banded with the brightest red and yellow to a height of fifteen hundred feet above the surrounding level. When it is illumined by the full sunlight, Flaming Gorge fully realizes its name ; and it is the entrance to the miraculous Red Cañon, which furrows the mountains to a surpassing depth.

Another grand rock is the Giant's Club, a towering mass almost round, that rises to a great height, and was at one time, according to scientific men, on the bottom of a lake. In the layers of sandstone many fossils of insects and plants have been discovered, and also the remains of fishes belonging to fresh water, though now extinct.

Thirteen miles from Green River, and two hundred feet higher than that station, is Bryan, where the railway touches Black's Fork, a stream which finds a way, from its source in the Uintah Mountains to its junction with the Green, through an unlovely valley of sage-brush and greasewood — two shrubs which, instead of enriching the earth with the brightness of vegetation, overspread it with a tangle of unsightly gray and ragged branches. The sage-brush is peculiar to much Western scenery. So pallid and parched is it, that its life-sap might have been absorbed in those heart-burnings of the earth whose results are seen in many a pile of volcanic rock ; its small, pale leaves are never fresh, and its limbs are always twisted and gnarled ; but, despite these symptoms of scanty life, it holds to the soil with extreme tenacity, and it crops out in great abundance over miles and miles of territory. Among the foot-hills and along the river-bottoms there are knots of pines and firs, and groves of aspens and cotton-woods—not enough, however, to relieve the sage-brush, which spreads itself over the landscape to the farthest horizon like a bank of mist.

About this time, while the train is moving through tedious miles of desert, we are prepared to agree with Hawthorne, that meadows are the pleasantest objects in natural scenery : "The heart reposes in them with a feeling that few things else can give, because almost all other objects are abrupt and clearly defined ; but a meadow stretches out like a small infinity, yet with a secure homeliness which we do not find either in an expanse of water or of air."

The apology usually offered for the least attractive land in the far West is, that, no matter how sterile it may be to look at, it is "rich in the primary elements of fertility," a fine-sounding phrase, which, though we listen to it at first with divided feelings of amusement and doubt, proves on investigation to have some truth in it. No plain is so sandy and barren that it is not amenable to the irrigating ditch, and

the introduction of a little stream of water is often followed by an outbreak of what seems to be natural verdure, wonderfully bright and hardy, which shows how fruitful the soil may become under favorable treatment. At Fort Bridger, eleven miles south of Carter, the third station westward from Bryan, three hundred bushels of potatoes have been raised from half an acre of ground, and the ground there is as hopeless to all appearances as that in view from the railway.

Beyond the yellow and gray folds of the nearer land, among which strange-looking masses of rock occasionally loom up, the Uintah Mountains, extending eastward and



Uintah Mountains.

southeastward from Utah, now arise, and bound the prospect with a line of deep, dark blue. They are visible for hours; sometimes when the train rolls over a high crest they are revealed from their purple bases to their snowy summits, and then, as it

descends into the hollow, they are hidden in all save the highest tips. The peaks, or cones, dark as they seem at this distance of seventy or eighty miles, are most distinctly arranged in layers, and rise two thousand feet above the springs that feed the streams in the foot-hills below. They are vast piles, resembling Egyptian pyramids on a gigantic scale, without a trace of soil, water, or vegetation. Such, at least, the peaks are; but the lower slopes are covered with thick forests, which are succeeded nearer the timber-limits by pines that have been dwarfed down to low, trailing shrubs, and the ridges inclose some large basins of exquisitely clear water. One of these, called Carter's Lake, is held in on one side by a round wall of sandstones and slate, and on the other side by a dense growth of spruce-trees. The hollow for the gathering of the water, says a United States geologist, was caused by an immense mass of rock sliding down from the ridges above; springs oozed out from the sides of the ridge, snows melted, and so the lake was formed. Carter's Lake is 350 yards long, 80 yards wide, and 10,321 feet above the level of the sea; and it is, like many other natural reservoirs, embosomed in the valleys of these mountains.

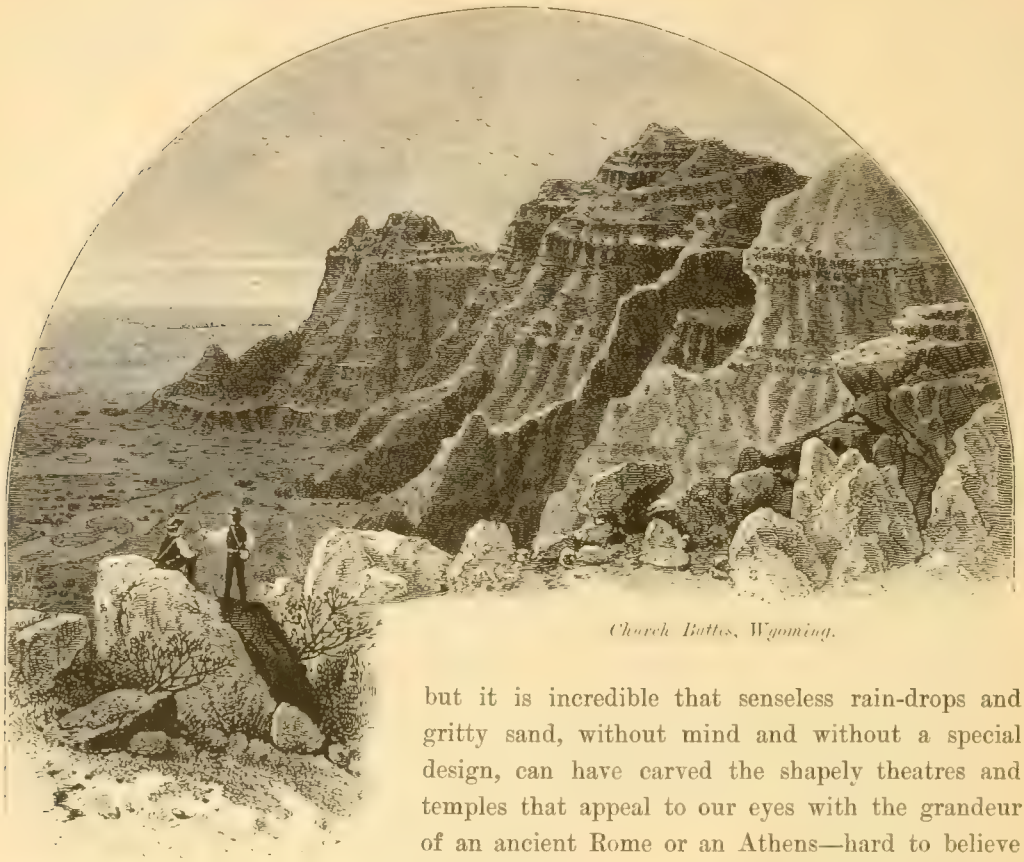
One of the highest peaks in the mountains—Gilbert's Peak—is named after General Gilbert, and is plainly marked by layers of red-sandstones and quartz inclining to the southeast. It is uplifted abruptly from a lake about fifty acres in extent, and has the remarkable elevation of 13,250 feet above the sea-level, the lake itself being eleven thousand feet high. Another notable peak springs out in isolation from the pyramid already mentioned, and has been called, from its resemblance to a Gothic church, Hayden's Cathedral. The foot-hills are clothed with pines, varied by that most beautiful of all Western trees, the quaking asp, which, with its silver-gray bark and tremulous, oval, emerald leaves, stands out in shining contrast to the sad foliage of the evergreens.

Near by this region begin the so-called "Bad Lands," on the old overland stage-road ten miles to the south. The modern road of iron rails touches this old route from time to time in its winding course; but the glory of the days when the pony express, the fast coaches, and the hundreds of immigrant trains passing every day raised the dust in choking clouds, has only a reminder in the tottering telegraph-poles out of use and unstrung, and the deserted ranches, which once furnished rest and refreshment.

The wonderful Church Buttes of Wyoming Territory are one hundred and fifty miles east of Salt Lake City, the capital of Mormondom, and are nearly seven thousand feet above the sea-level. They consist of soft sandstone and colored clay in perfectly level layers, and one of our eminent scientific men, Professor Marsh, has discovered in them the remains of huge creatures now extinct, such as turtles twenty feet long, gigantic birds, etc., the jaws of some of these great animals of an earlier age measuring nearly five feet in length. Remains of the rhinoceros have also been discovered. Rattlesnakes are found here in great numbers, and their rattling sounds are as noisy as the buzzing of grasshoppers in a hay-field.

The interesting features of Church Buttes and the Bad Lands are the bands of color formed by the successive layers containing animal remains, which in some in-

stances, as at Green River, are exceedingly vivid, and seem to have been drawn by a human hand. As we stand upon one of the summits it is difficult, indeed, to convince ourselves that these stone piles so beautifully adorned are not the result of human workmanship. The elements striving with the centuries may cause strange forms,



Church Buttes, Wyoming.

but it is incredible that senseless rain-drops and gritty sand, without mind and without a special design, can have carved the shapely theatres and temples that appeal to our eyes with the grandeur of an ancient Rome or an Athens—hard to believe that the mere process of "weathering," as the geologists call it, can have shaped such masterpieces out of chaotic rock. The very pillars that clasp the portico of that temple yonder and dwindle away, through their hundreds, into a dim perspective, are built with exactness, and uphold a filigree cornice whose dainty carving bespeaks the chisel of a sculptor. The lonely pillars and obelisks are without flaw: the domes that cap some of the buildings are perfect half-spheres: the flutings of the columns are uniform in depth and width, and the broad terraces of steps are the same in distance from each other. The desert's sand-blast and the constant action of the rain-drops may have worn the rocks on Laramie Plain and Dale Creek into their present uncanny look, but we can hardly believe the scientific talk and the testimony of our sight as we look down from the distance upon the strange architecture of the Bad Lands. A nearer view, however, dissipates our illusion: then we notice defects that were not visible before, and observe how spouts

and drops of water have furrowed the pliant material of the rock, tunneling and grooving with resistless industry, and imparting the color of the strata to the surrounding streamlets. But it is not all illusion; the resemblances often prove to be real, and are marvelous beyond the conception of any one who has not seen them.

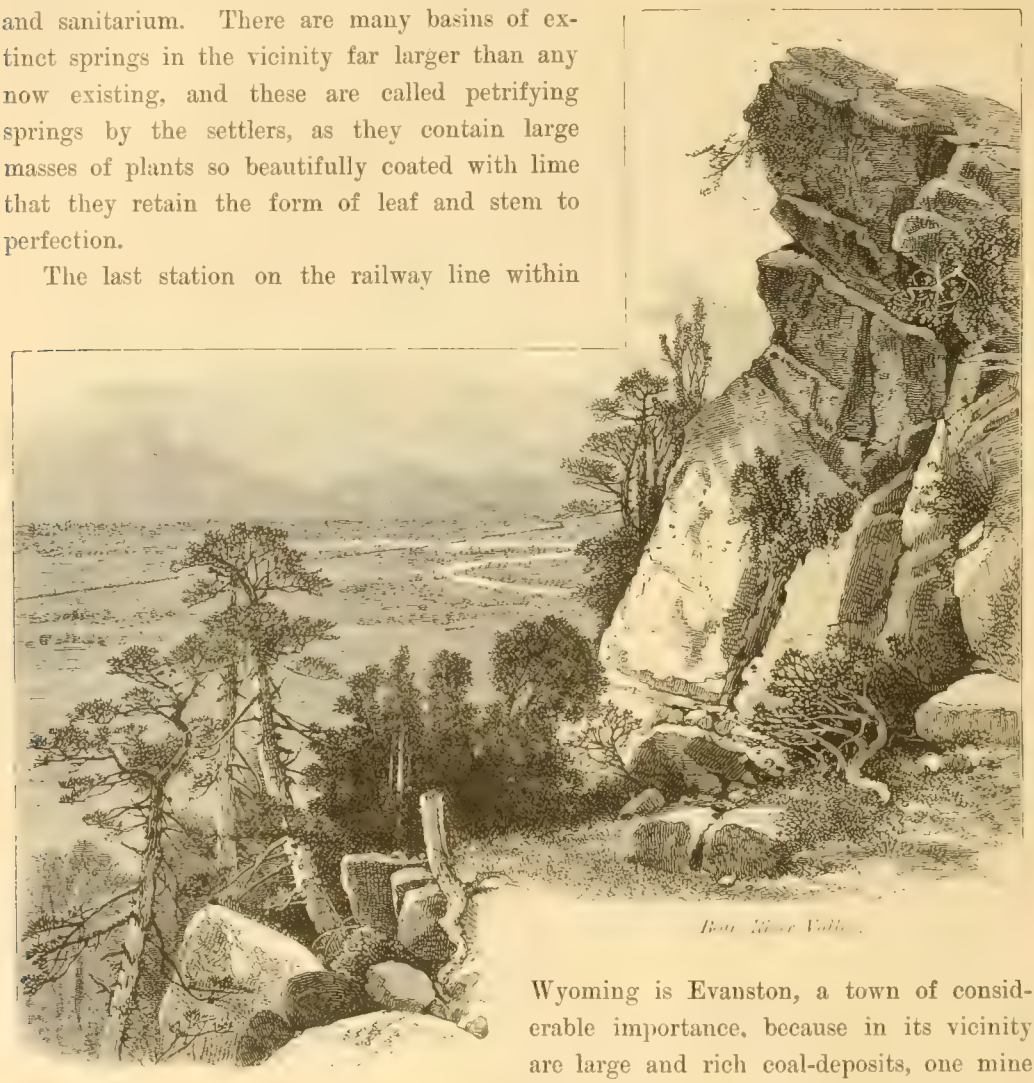
We now arrive at a station called Hilliard, which attracts attention by its curious nest of low houses that might be almost mistaken for Indian wigwams or Chinese huts. These are charcoal-furnaces. Another thing which makes people wonder as to its possible use is a high, narrow trestle-work bridge, supporting a huge trough in the shape of a V—an object familiar to people living on the Pacific coast, but a strange sight in more easterly regions. It is known as a flume, and the wood burned in the kilns is floated through it for a distance of twenty-four miles from the mountains. Over two million feet of lumber were used in its construction, and from its head to its mouth it falls two thousand feet, the stream rushing through it and sweeping the logs on its bosom with a rapidity and ease that make us wonder why people ever haul wood in cumbrous wagons. The mill at the head, where the pine-trees are sawed down into the convenient shape in which they arrive at Hilliard, has a capacity for sawing forty thousand feet of lumber every twenty-four hours, and the kilns consume two thousand cords a month, producing a hundred thousand bushels of charcoal. When the train crosses the Bear River, a few miles beyond this station, the eye of the traveler rests on a lovely valley, noticeable on account of its great beauty.

The various industries which have sprung up along the Union and Central Pacific Railways and their branches in the last ten years, mostly, it is true, connected with the mining interest, are quite marvelous, and perhaps excite one's sense of wonder even more than the evidences of enterprise in the more settled regions of the country. The contrast between the bleakness and savagery of the adjacent region and the mills, workshops, etc., which spring so rapidly around many a railway-station or plant themselves so sturdily in some remote region of the mineral-bearing hills, strikes the fancy with great force. Ten or twenty years ago a desert of arid plains or steep and inaccessible mountains—now paying tribute to the luxuries and needs of mankind by yielding freely to his hand; then a lair of wild animals and a hunting-ground for the painted savage, now a firmly settled outpost of civilization. The pluck and push of the American people have shown themselves in great works for a whole century, but at no time are they pictured more vividly than in the sights which unroll like a panorama before the traveler across the continent as he is hurried from ocean to ocean by the power of steam.

As the tourist approaches the boundary-line between Idaho and Utah he passes through a country most attractive on account of its natural beauty and its game. To sportsman, naturalist, and artist the catalogue of its wonders is almost without limit. The brooks which flow into the main streams are full of trout, and the forests are full of deer, bear, foxes, wolves, grouse, and quail, while such game as the panther, or puma, as it is called in the West, gives a keener zest of danger to the

adventurous hunter. A lake of considerable size near the station of Evanston surpasses even the Yellowstone in the beauty of its rocks; and through this pretty body of water, nearly six thousand feet above the sea, the line which divides Utah from Idaho passes. At the big bend of the Bear River, which the railway crosses in this vicinity, we find a most interesting group of warm soda-springs which are likely in the future to be frequented as a watering-place and sanitarium. There are many basins of extinct springs in the vicinity far larger than any now existing, and these are called petrifying springs by the settlers, as they contain large masses of plants so beautifully coated with lime that they retain the form of leaf and stem to perfection.

The last station on the railway line within



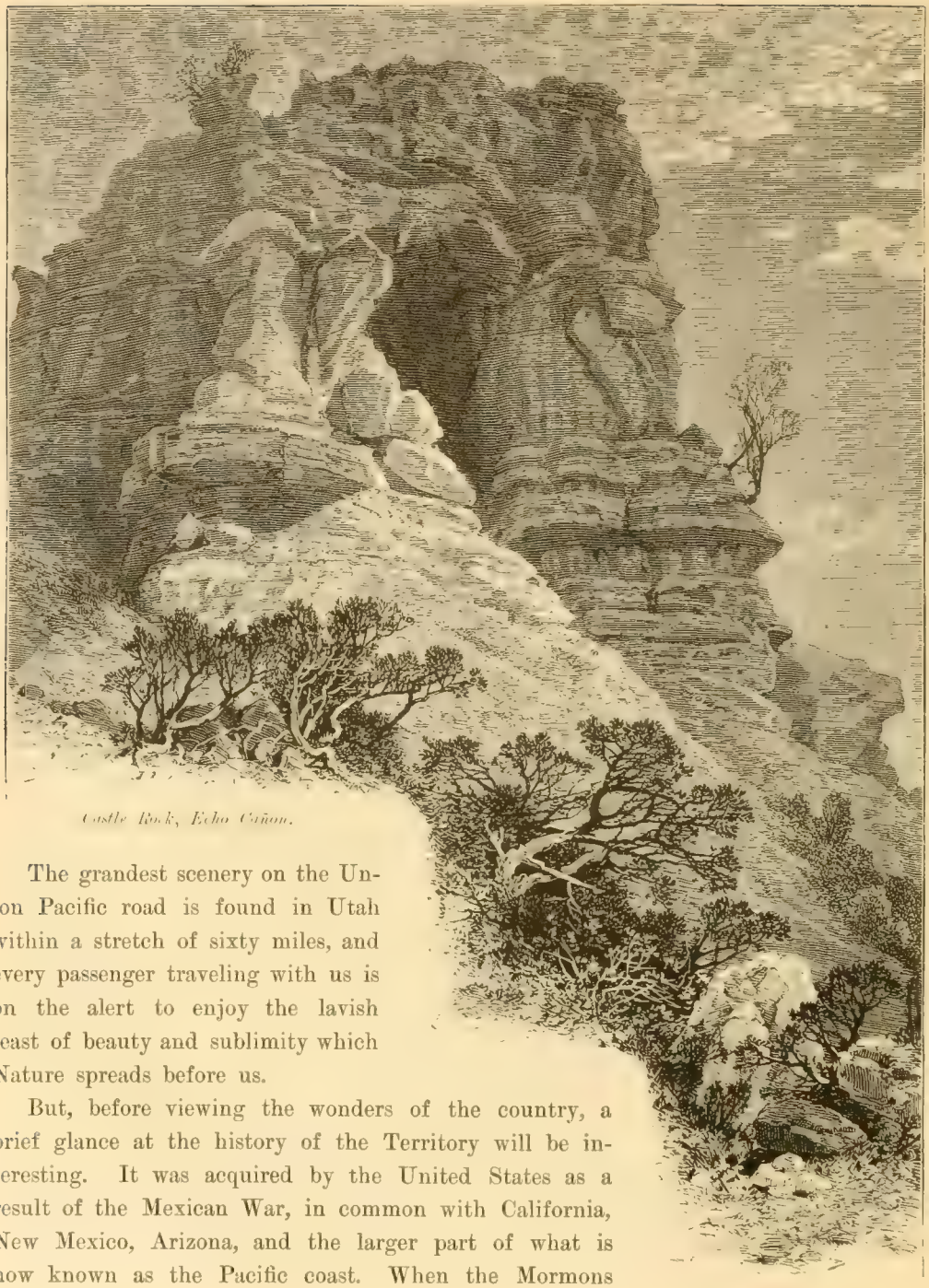
Bear River Valley.

Wyoming is Evanston, a town of considerable importance, because in its vicinity are large and rich coal-deposits, one mine alone giving an annual yield of one hundred and fifty thousand tons. At this station we are brought face to face with the problem of Chinese labor. The pigtailed Celestials work on the railway, tend at the bars and restaurants, do the cooking (and, needless to say, the washing), and altogether crowd out the labor of Ireland and Deutschland; but those who employ this labor seem to be perfectly well satisfied, and the hungry tourists who swarm into the



Echo Cañon, Utah.

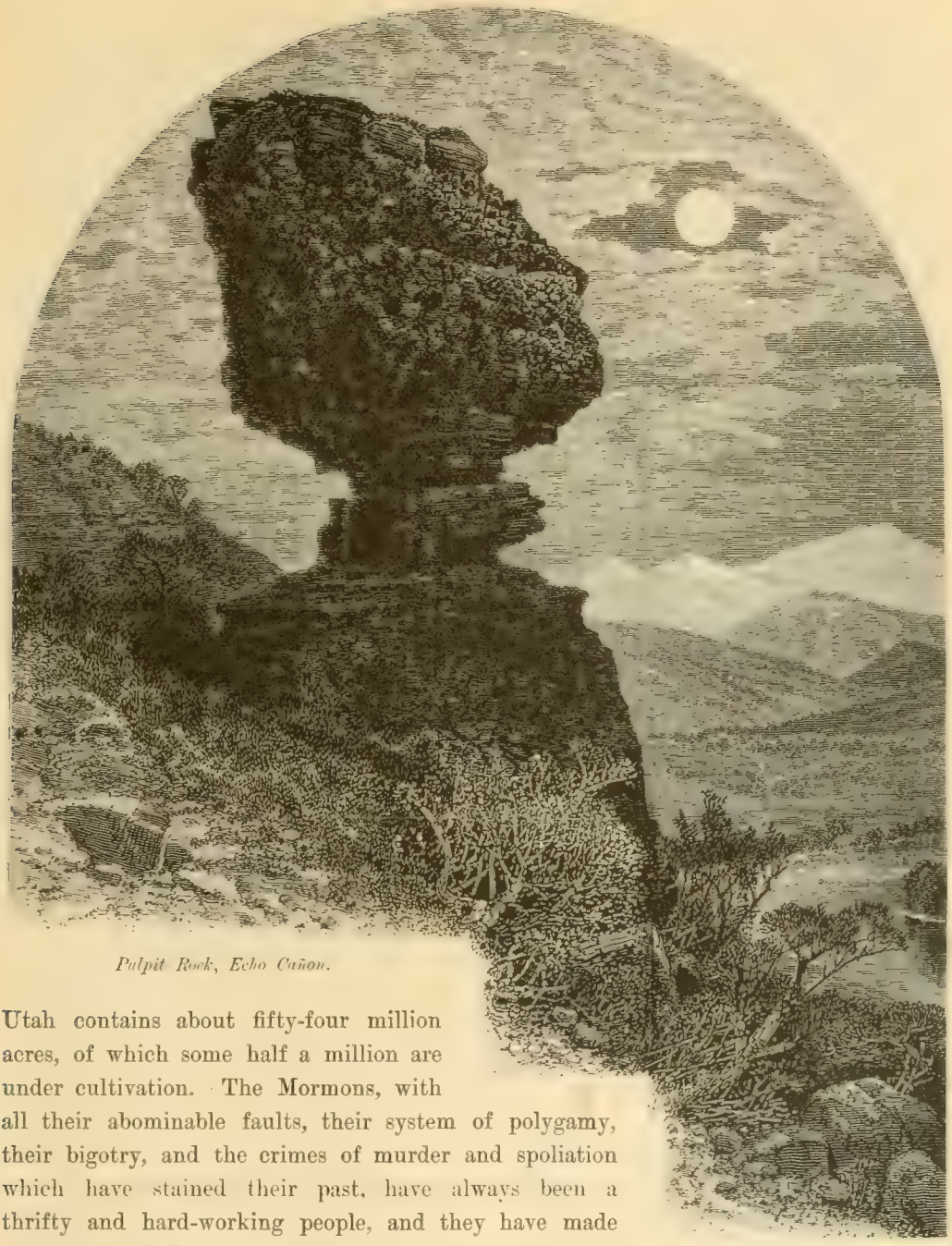
railway eating-house certainly have no reason to complain of their treatment on the part of these smiling, polite, attentive, white-aproned Orientals.



Castle Rock, Echo Cañon.

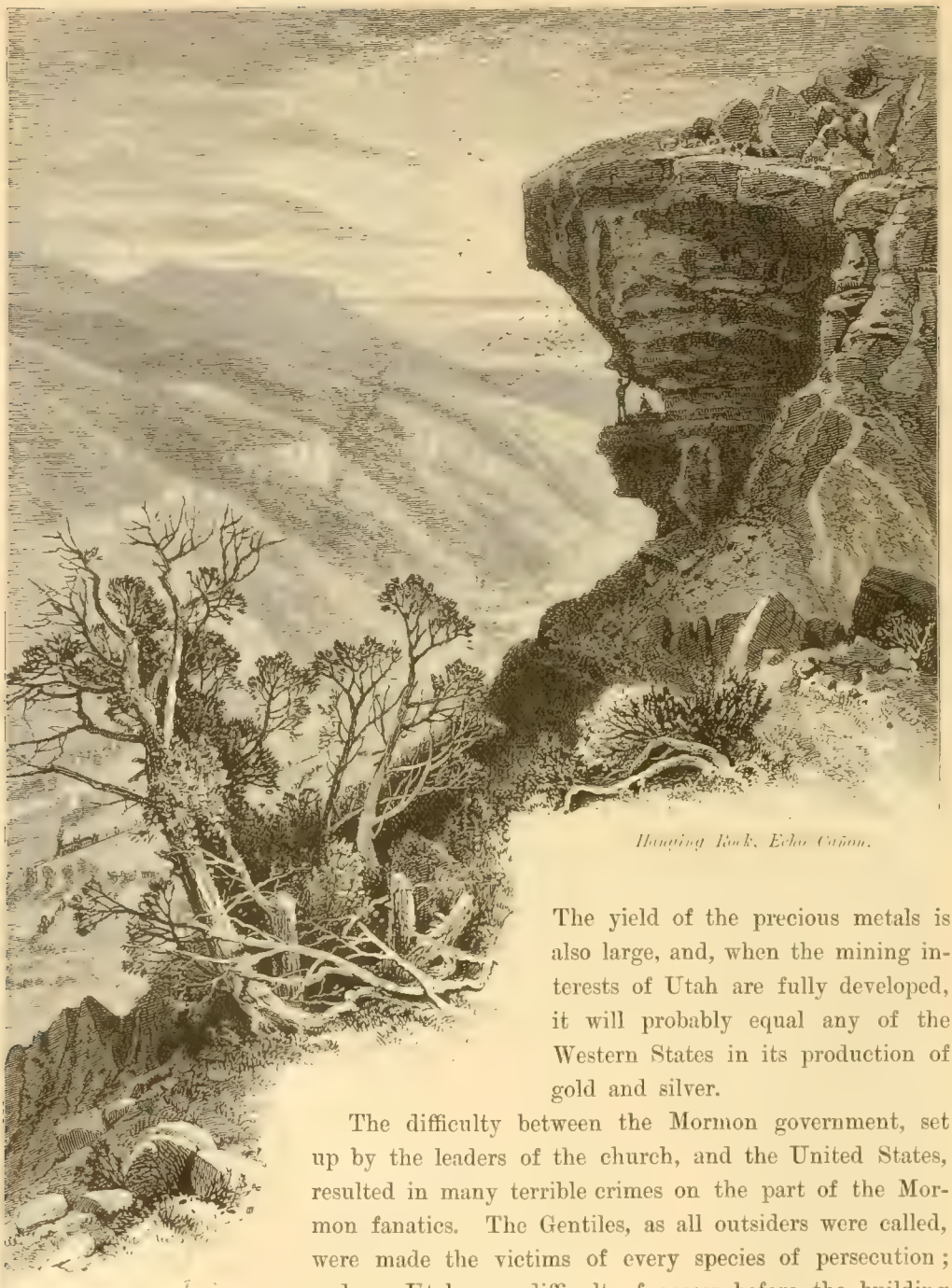
The grandest scenery on the Union Pacific road is found in Utah within a stretch of sixty miles, and every passenger traveling with us is on the alert to enjoy the lavish feast of beauty and sublimity which Nature spreads before us.

But, before viewing the wonders of the country, a brief glance at the history of the Territory will be interesting. It was acquired by the United States as a result of the Mexican War, in common with California, New Mexico, Arizona, and the larger part of what is now known as the Pacific coast. When the Mormons were driven out of Illinois, in 1846, they appropriated this then utterly wild region, and named it the State of Deseret. The name was shortly afterward changed to Utah, the State of Nevada then being included in it.



Pulpit Rock, Echo Cañon.

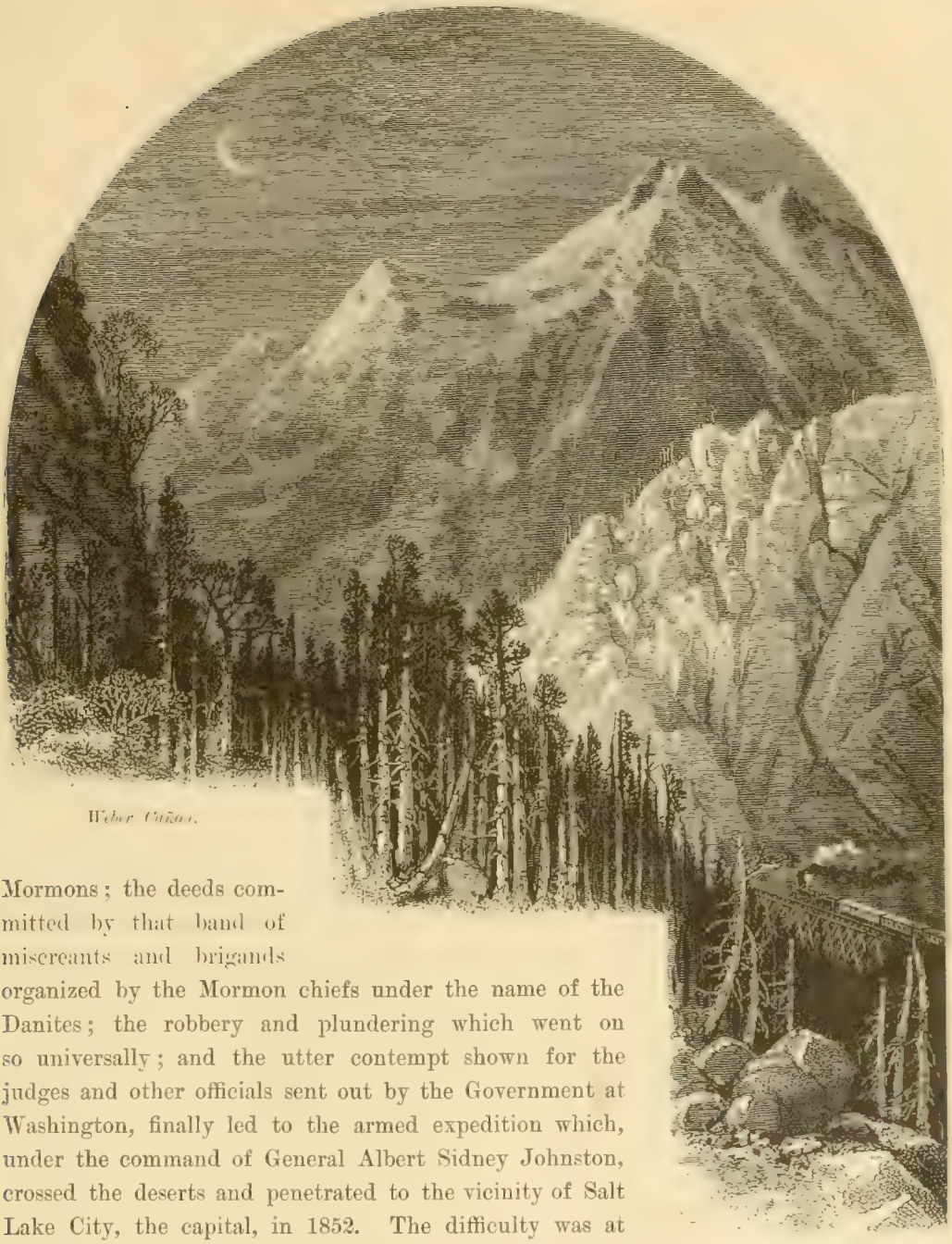
Utah contains about fifty-four million acres, of which some half a million are under cultivation. The Mormons, with all their abominable faults, their system of polygamy, their bigotry, and the crimes of murder and spoliation which have stained their past, have always been a thrifty and hard-working people, and they have made many parts of the desert bloom like a rose by their skill in agriculture and the completeness with which they have carried out their system of irrigation. The products are chiefly grain and fruits, including apples, pears, peaches, plums, grapes, and, in some portions of the Territory, cotton, figs, and pomegranates. The climate is variable, but hot days are always followed by cool, refreshing nights.



Hanging Rock, Echo Cañon.

The yield of the precious metals is also large, and, when the mining interests of Utah are fully developed, it will probably equal any of the Western States in its production of gold and silver.

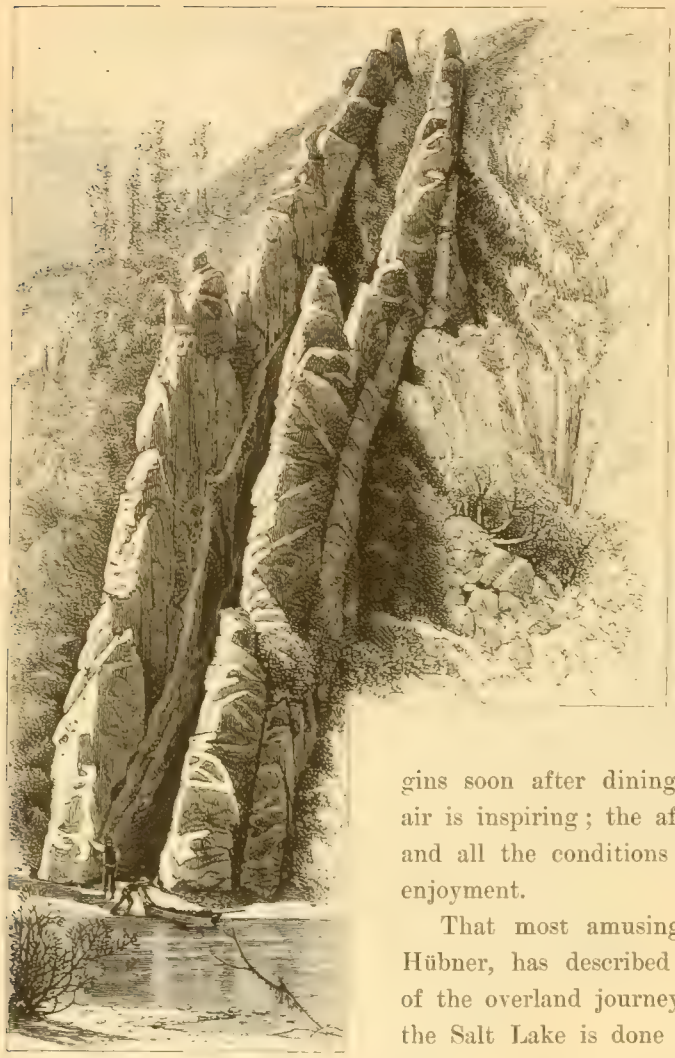
The difficulty between the Mormon government, set up by the leaders of the church, and the United States, resulted in many terrible crimes on the part of the Mormon fanatics. The Gentiles, as all outsiders were called, were made the victims of every species of persecution; and, as Utah was difficult of access before the building of the Pacific Railways, it was not easy for the United States to protect the emigrants who went to this Territory to settle. The massacres, either committed by the Mormons themselves, or by the Indians instigated by the



Weber Cañon.

Mormons; the deeds committed by that band of miscreants and brigands organized by the Mormon chiefs under the name of the Danites; the robbery and plundering which went on so universally; and the utter contempt shown for the judges and other officials sent out by the Government at Washington, finally led to the armed expedition which, under the command of General Albert Sidney Johnston, crossed the deserts and penetrated to the vicinity of Salt Lake City, the capital, in 1852. The difficulty was at last compromised without coming to the final test of battle, and the Mormons submitted to the United States authority, though the secular power has always practically remained in the leaders of their church.

Let us now return to our journey across this remarkable region. For four hours after entering Utah there is not a moment of lagging interest to the traveler as he



Devil's Slide, Weber Cañon.

passes the wonders of Echo, Weber, and Ogden Cañons. All down the southern side of Echo Cañon it is a well-rounded range of hills, with enough grass to show some soil and a few bold masses of rock. But on the northern side there is a sheer bluff, or escarpment, from five to seven hundred feet in height, of a reddish color, which increases in warmth till it fairly glows with living heat. The scene has every element of power to impress the fancy, strong rich color, massive forms, and a novel weirdness of effect. The descent into the cañon begins soon after dining at Evanston; the mountain air is inspiring; the afternoon light grows mellower, and all the conditions are favorable to our highest enjoyment.

That most amusing of travelers, the Baron de Hübner, has described his impressions of this part of the overland journey as follows: "The descent to the Salt Lake is done without steam, merely by the weight of the carriages, and, although the brake is put upon the wheels, you go down at a frightful pace, and, of course, the speed increases with the weight of the train; and, the train being composed of an immense number of cars and trucks, I became positively giddy before we got to the bottom. Add to this the curves, which are as sharp as they are numerous, and the fearful precipices on each side, and you will understand why most of the travelers turn pale."

This picture is overdrawn, and the impressions are those of a highly nervous person: but the real experience is sufficiently exciting as the train sweeps down and sways from side to side with increasing speed, now threatening to hurl itself against a solid cliff, then curving off like an obedient ship in answer to her helm.

Just eastward of the head of the cañon the country is undulating and breezy; farther westward it becomes more broken; the foot-hills present craggy fronts; and

detached masses of rock, curiously colored and carved by the weather, excite our wonder.

We must observe quickly to appreciate all the varied beauties and curiosities that follow in swift succession. The high, abrupt wall on one side, so smooth that it might have been cut by a saw, and the glimpses of mountains on whose upper flanks the snow never melts, are most impressive and interesting, but they are not the only things which make a journey through Echo Cañon memorable.

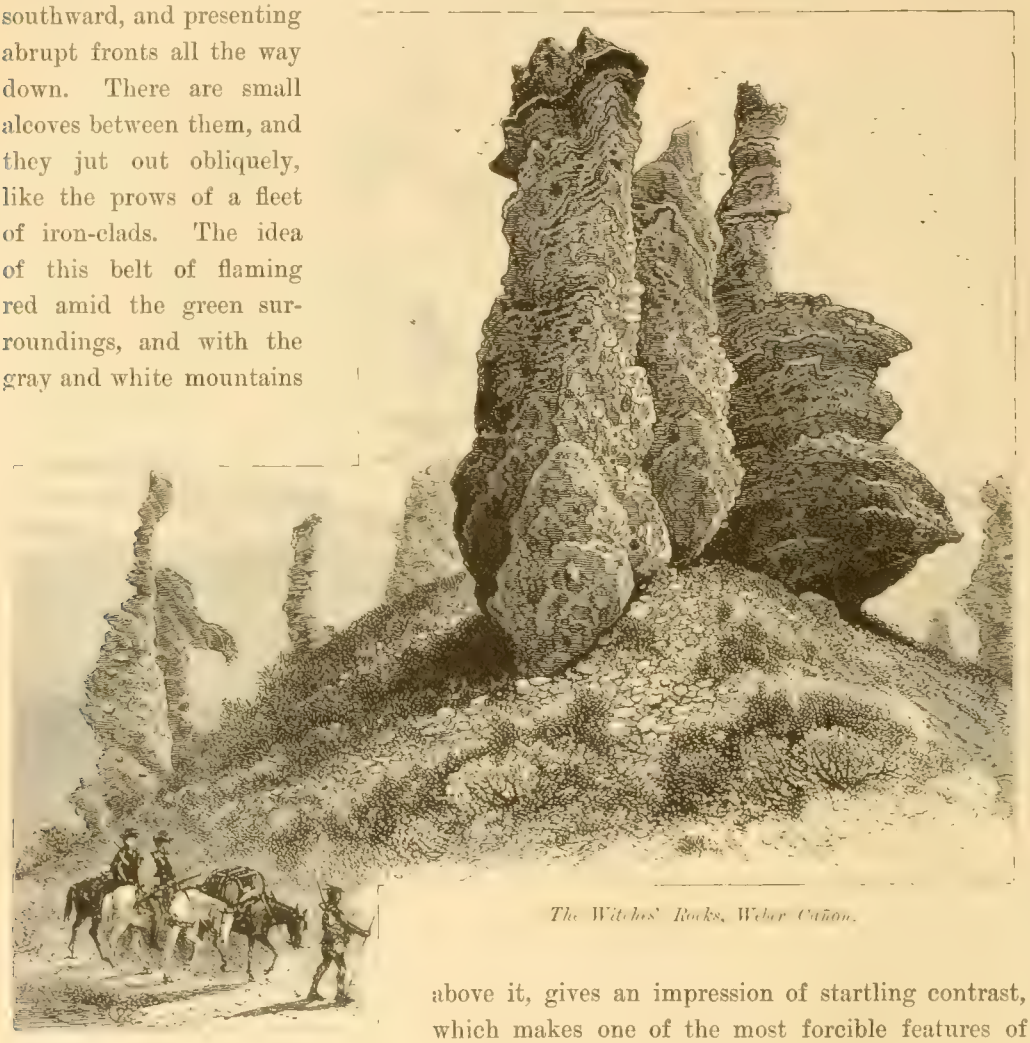
The great rocks often assume the likeness of an artificial object, as at Green River and among the Bad Lands; it seems, as we round some butte, shaped like a castle, that we must be in an old country; that feudal labor, not the patient carving of rain-drops and the sand of the plains, must have shaped the pinnacles which taper with such fineness, and the towers so perfectly round that they closely resemble human handiwork.

At the head of the cañon there is a formation called Castle Rock, which imitates an old, dismantled fortress, and near by is another formation, called the Pulpit, on account of its likeness to the object of its name and by virtue of a tradition that from it Brigham Young preached to the Mormons as he led them into their promised land. The railway curves around Pulpit Rock, and an outstretched arm from the car might touch it. Next comes Sentinel Rock, an obelisk of conglomerate about two hundred and fifty feet high, which shows the influence of "weathering," i. e., the action of the elements; and seven miles from Castle Rock is Hanging Rock, from which point of view a much better idea of the wild tumult of shapes into which the country is tossed can be had than from the bed of the cañon. The earth is split by a score of cross-ravines, which extend like blue veins from the main artery and map the face of the country with shadow; lonely columns, positive and brilliant in color, stand without a visible connection with the main rock from which they were originally broken off; odd groups of conglomerate, much like inverted wine-glasses in shape, and plainly banded with several layers of color, sprout out like so many huge mushrooms hardened into stone; and, clasping all within their basin, are the circling mountains of the Wahsatch and Uintah ranges, silvered with perpetual snow on their pointed peaks and impenetrably blue where the pines are. These two chains are among the most picturesque of all the Western mountains. They fairly bristle with peaks and side-ridges shooting out like spurs, and they soar from the plain at a bound, as if they would cleave the very skies.

The swift waters of Weber River wind by the track through a channel overhung with bright shrubs; and the immigrant road, on which large caravans are still found traveling, crosses and recrosses the iron pathway, which, from one of the adjoining heights, looks like a thread of silver, while the train appears to be a mere child's toy in contrast with the mighty rocks between which it is rushing. A sharp curve around an immense sandstone butte on the right hand of the cañon now changes the scene. The gorge opens into a wide valley completely surrounded by mountains, in which are much cultivated land and thriving settlements—a little garden of Eden

by contrast with the desolate and gloomy grandeur through which we have been passing.

Emerging from the valley, between Echo and Weber Cañons, we can now see the portals of the latter flanked on the southwest by a mighty dome-shaped cliff of brilliant red, nearly one thousand feet high, which is the first in a chain of similar formations extending southward, and presenting abrupt fronts all the way down. There are small alcoves between them, and they jut out obliquely, like the prows of a fleet of iron-clads. The idea of this belt of flaming red amid the green surroundings, and with the gray and white mountains above it, gives an impression of startling contrast, which makes one of the most forcible features of Western scenery.



The Witches' Rocks, Weber Cañon.

While the curious rock-shapes of Echo Cañon are still in mind, we are inclined to repeat what we have said before of the transient pleasure which mere oddity in nature affords. It is to be granted that a curiosity will attract many, when a thing of beauty passes unnoticed; and people who could gaze on one of the purple peaks of the Wahsatch range, or on one of the terrific cliffs of Echo, without a touch of feeling, go into ecstasies in watching a rock with a likeness to something merely



The Devil's Gate, Weber Cañon.

strange. It is noticeable how often the crowd of observers on the rear platform of the car in passing through the cañons let slip the sublime and grasp what is merely odd,

just as, with some audiences in the theatre, Hamlet's deep sorrows are immediately forgotten in the funny gossip of the two grave-diggers. These oddities of rock give the utmost delight to the average spectator, and it would be a pity to overlook them, as they are especially characteristic of the West; but they soon weary the better taste, and it is a still greater pity when they are allowed to absorb the whole attention.

It is not possible, though, for the most careless mind to pass unmoved the cliffs of Weber Cañon, through which we are now going. They are absolutely perpendicular walls of rock; the prevailing color is a bronze green, but green is not the sole color. Masses of bright-red conglomerate, pale-gray limestones, bluish granites, and vari-colored stratifications, also crop out in towers, crags, and caverns. We plunge into tunnels cut through the solid mountains; the high peaks that have hitherto been distant descend into the cañon at an angle of eighty degrees, and loom directly above us: lateral ribs of rock project from the slopes, and some of them are of fan-like formation. The Weber River flashes through the ravine, and breaks into a wrathy white as it leaps from ledge to ledge; even above there is no calm, and the clouds are torn into shreds, and contribute to the general wildness of the scene as they drift to the east.

In all probability, says a well-known authority, the vast area usually described as the Great American Desert, between the Wahsatch Mountains on the east and the Sierra Nevada on the west, was one great lake, in which the mountains rose as islands, and the lakes, large and small, which are scattered over the basin at the present time, are only remnants of the former inland sea. The deposits which cover the lowlands are mostly lime and sand beds, and these are often filled with fresh-water and land shells, indicating a very modern origin.

The range extends, with intervals in its continuity, far northward of the railway, into Montana and Idaho, and many of the peaks are within the region of perpetual snow. There are hundreds of cañons with vertical walls from one thousand to two thousand feet in height.

The Thousand-Mile Tree, on the left of the railway-track, marks the thousandth mile west of Omaha; and near this is a notable formation called the Devil's Slide, two parallel ledges of granite, fourteen feet apart, projecting from the mountain-side to a height of fifty feet. We soon emerge from the cañon into another fertile valley, in which the river widens and courses through several channels. The vegetation is abundant here, and there is some breathing-space between the mountains. Children offer apples, peaches, and pears for sale in the stations; and as we pass through, on a warm, hazy afternoon of August, the orchards are bowed down with fruit. This pastoral element in the midst of such stern sterility and wildness as the mountains suggest is a grateful relief—a relief, because the giant cliffs and buttes of the cañon are oppressive; and a surprise, because the shallowness of the soil is very apparent.

The length of the valley is quickly traversed, and in a few moments we pass through the Devil's Gate into Ogden Cañon, another giant chasm held in by rocks from a thousand to twenty-five hundred feet in height. Ogden Cañon emerges in

Salt Lake Valley, and before long we change cars at Ogden, where the Union Pacific road ends and the Central Pacific begins, completing the first part of our journey. At this place also two other railways have their starting-point, the Utah Central and the Utah Northern.



Ogden Cañon.

SCENERY OF THE PACIFIC RAILWAYS.

PART II.

OGDEN TO SAN FRANCISCO.

Ogden and its strange types of life—Salt Lake City—The Great Salt Lake—The junction of the Central and the Union Pacific roads—Nevada, the desert State—The Sierra Nevadas—The valley of the Truckee River—Lake Tahoe—Virginia City—Donner Lake and its tradition—The western slope of the Sierras—The great snow-sheds—Blue Cañon and Giant Gap—Water as a means of mining—Cape Horn—The Sacramento Valley—Sacramento and San Francisco.

OGDEN, next to Salt Lake City, is the most important town in the Territory of Utah, its population being about six thousand. It is built on a high plateau, with



Ogden, and the Wahsatch Range.

lofty mountains in the distance, and is a very good attempt at a city. The scene at the station on the arrival of the train is full of life and variety. Passengers flit

hither and thither, promenading or looking after the transfer of their tickets and baggage; newsboys shriek out the New York papers; eager brokers, their hands full of coin, ply travelers with offers of exchange for currency; dining-room gongs are booming furiously, and hotel agents are soliciting custom. The moving throng is curious in its varieties of dress, manner, and language. The Ute Indian, wrapped up in gaudy blanket, and smeared with vermilion, rubs elbows with the sleek Chinaman in blue blouse, cloth shoes, and bamboo hat; the negro and the Spaniard, the German and the Irishman, the gorgeously arrayed "swell" of Vienna and Paris, and the Scandinavian peasant, mingle in the most amusing contrasts. But what gives the scene most interest is not the crowd itself, nor the variety of costume, but the situation —the grand, vivid hills on every side tinged with fiery light, the broken outlines of the peaks that are glowing with passionate heat, the mountain-fields of perpetual snow, the green lowlands, and, above all, the shining sky which is changing color every moment. There are few lovelier sights than Ogden in a summer's sunset; and, if, as the traveler pro-



Salt Lake City, from the Wahsatch Range.

ceeds on his westward journey, the moon should be near its full and should follow the splendors of the dying day with its mild light, silvering the wide expanse of the lake and turning to a whiter white the low rim of alkaline shore, it will seem to him that he is leaving paradise behind.

Let us delay our onward journey to San Francisco long enough to take a brief run to the capital of the Latter-Day Saints, Salt Lake City. The country between Ogden and the Mormon metropolis is quite thickly settled, and the train stops at four Mormon villages, with nothing to mark them specially except the co-operative stores with an open eye and the legend "Holiness to the Lord" painted over the door-ways.

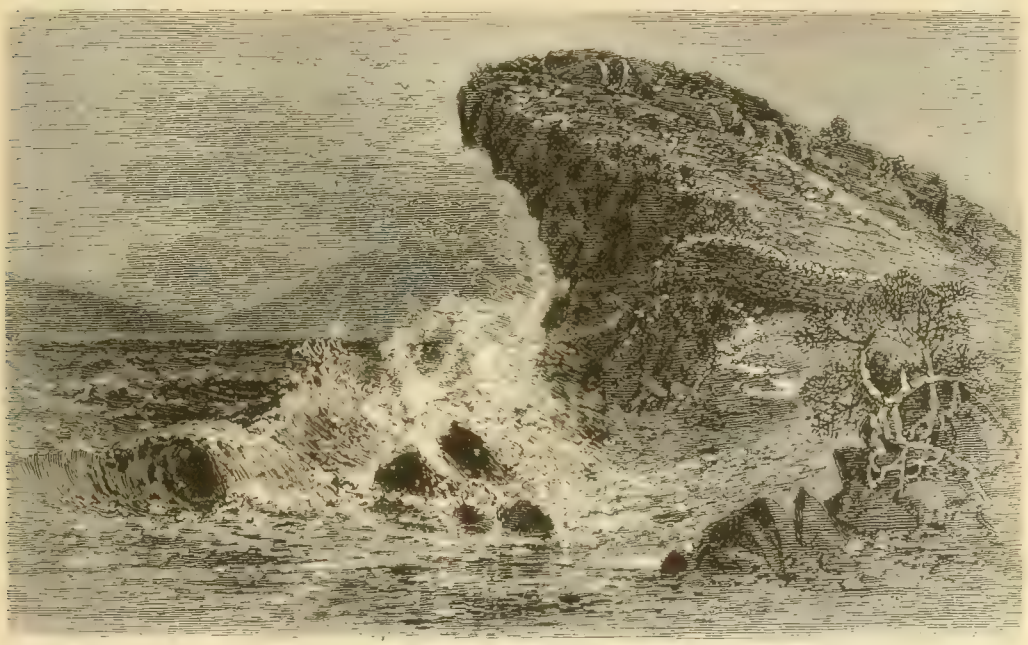
The station at Salt Lake City is surrounded by grass, and the little cottages near the track, such as in other cities are mean and filthy, are pleasantly rustic with flowering vine and trellis.

The first street into which we emerge is an example of all the streets that divide the city into handsome squares or blocks; the road-way is firm and smooth; the sidewalks would be no discredit to London or Paris. Clear streams of water trickle along the curb at both sides, and feed the lines of shade-trees, not yet fully grown, that are planted with the same exactness of interval as cogs are set upon a wheel. Nothing is slovenly; everything shows care and attention; the unpleasant loafer, whom we have come to look upon as a large part of the far Western railway town, is invisible; the horse-car and omnibus conductors are very civil; the crowd at the station and in the streets is a most respectable crowd.

The bigness of spaces is astonishing. All the streets are one hundred and thirty-two feet wide between the fence-lines, including twenty feet of sidewalk on each side. The blocks contain about eight lots apiece, each lot measuring about one acre and a quarter, and the builders have been required to set their houses at least twenty feet back from the front fences of their lots. Fifteen or twenty years ago there was scarcely a structure of superior material to the convenient adobe or baked mud; but now, when the harvest of the severe pioneer toil is being reaped, wood, brick, iron, granite, and stucco, are brought into use. The population of the city is about twenty-one thousand; six newspapers are published; the theatre is a popular institution, at which many stars and traveling companies perform; and the Gentile is allowed a freedom of speech which would once have cost him his life. Every householder cultivates land surrounding his dwelling, and altogether the appearance is a quaint mingling of country and city very pleasant to the eye and fancy. An eloquent writer, Fitzhugh Ludlow, speaks quaintly of this feature of the Mormon capital:

"In some instances, the utilitarian element, being in the ascendant, has boldly brought the vegetable-garden forward into public notice. I like the sturdy self-assertion of those potatoes, cabbages, and string-beans. Why should they, the preservers and sustainers of mankind, slink away into back-lots, behind a high board fence, and leave the land-owner to be represented by a set of lazy bouncing-bets and stiff-mannered hollyhocks, who do nothing but prink and dawdle for a living—the deportment Turveydrops of a vegetable kingdom? Other front-yards are variegated

in pretty patterns with naturalized flowers—children of seed brought from many countries: here a Riga pink, which reminds the Scandinavian wife of that far-off door-way, around which its ancestors blossomed in the short northern summer of the Baltic; here a haw or a holly, which speaks to the English wife of Yule and spring-time, when she got kissed under one, or followed her father clipping hedge-rows of the other; shamrock and daisies for the Irish wife; fennel—the real old 'meetin'-seed' fennel—for the American wife; and in some places where tact, ingenuity, originality, and love of science, have blessed a house, curious little Alpine flowers of flaming scarlet or royal purple, brought down from the green dells and lofty terraces of the snow-range, to be adopted and improved by culture. Of all, I liked best a third class of front-courts, given up to moist, home-looking turf-grass, of that deep



Black Rock, Great Salt Lake.

green which rests the soul as it cools the eyes—grass, that febrifuge of the imagination which, coming after the woolly gramma and the measureless stretches of ashen-gray sage-brush, makes the traveler go to sleep singing."

In summer the atmosphere would be sickly with the combined odors, were it not for the stirring winds that are constantly blowing from the mountains; and many of the houses in the business-quarter of the city are covered by sweet-briers and vines, which give them a countrified air in forcible contrast to the iron-and-brick realities of the mercantile stores adjacent to them.

While at Salt Lake City, we must not forget to take a train on the narrow-gauge road which will take us to the Great Salt Lake. The first glimpse of this is pleasing. The waves are short and crisp, the air refreshing with the smell of brine. We expect

to see a sullen waste, stagnating along low, reedy shores, "black as Acheron, gloomy as the sepulchre of Sodom." But, as we arrive on the borders in the fullness of a fine August morning, we discover something far different in character.

"The islands, indeed, are mountainous and barren, but they are beautified by rainbow hues. Nothing in Nature," says Ludlow, whom we again quote, "is lovelier, more incapable of rendition by mere words than the rose-pink hue of the mountains, unmodified by any such filtering of the reflected light through lenses of forest verdure as tones down and cools to a neutral tint the color of all our Eastern mountains, even though their local tint be the reddest sandstone. The Oquirrh * has hues which in full daylight are as positively ruby, coral, garnet, and carnelian, as the stones which go by these names. No amount of positive color which an artist may put into his brush can ever do justice to the reality of these mountains."

There is very little verdure on the shore, the beach and the flats behind it are crusted with white alkali, and the charm of the scene comes from the brilliant tints lent by the air and sunlight to sterile rocks and soil. The circumference of the lake is two hundred and ninety-one miles, and it contains six islands, the largest one, Church Island, having on it a mountain-peak three thousand feet above the lake-level. The water of Salt Lake is almost as heavy as that of the Dead Sea of Palestine. A bath in the lake is said to be one of the most delicious and bracing of experiences. The swimmer is almost forced out of the water by its buoyancy, and he glides over the water instead of through it. When he emerges his skin tingles as if he had been soundly switched with birch-twigs, owing to the peculiar effect of the alkaline salts with which the lake-water is so fully charged. But the after-effect is most exhilarating, like that of an ocean-bath much intensified.

Returning again to Salt Lake City, and thence to Ogden, let us resume our long journey toward the setting sun. The third station beyond Ogden is Corinne, a Gentile town of considerable importance, being the third largest place in the Territory. This place may be regarded as a prophecy of the time when polygamy and Mormondom will have become things of the past. The early attempts of the Gentiles to settle in Utah were opposed by the Mormons not only by craft, but by the most murderous violence, and the price paid by a Gentile for the privilege of plain speaking was a pistol-shot or a bowie-knife stab dealt in the dark, or an overwhelming attack by a band of assassins. Even now a Gentile shopkeeper in a Mormon town is annoyed and opposed in every possible way. But in spite of their hate the Mormons dare not now resort to the means which found such a terrible agency in Porter Rockwell and his band of Danites, or "Avenging Angels." The most that the Mormon bigots can do now is to revile and curse Corinne and its inhabitants; but it thrives very well in spite of this wordy hostility. Near Corinne is seen Bear River, and a few miles beyond it, at a station called Promontory, the Union Pacific Railway coming from the east met the Central Pacific coming from the west on May 10, 1869, thus completing the long iron bands which tied the two oceans together. The

* The name of the mountain-spur which borders and almost cuts the Great Salt Lake in two.



Bear River, Utah.

last tie was made of California laurel, trimmed with silver, and the last four spikes were of solid silver and gold.

For more than one hundred and thirty miles we whirl by station after station, without seeing much of special interest, till we reach the boundary-line which separates Utah from Nevada. The latter is, indeed, true to its name, the "Desert State," and the dreariest day of the seven occupied in the overland journey is spent in cross-



Great Salt Lake, from Promontory Ridge.

ing it. Scientific men tell us that the Great Salt Lake is the last remaining pool of a great sea which spread from the Wahsatch Mountains on the east to the Sierra Nevadas on the west. The drying-up of that sea has left a wilderness than which Sahara is not more desolate, nor a burned-out furnace more parched and dry. Out of a vast yellow plain rise a few broken, melancholy ranges of mountains, looking



Indian Camp in the Great American Desert.

woe-begone, as if they were ashamed of being found in such a country. They are beautiful only as they recede in the distance, and catch color from the air and sunshine. The earth is alkaline, and is whirled up by the least wind in blinding clouds of dust, and the only vegetation is that of the gray and ugly sage-brush. It is as if

a great fire had swept across and left it red and crisp, smoking with ashes and cinders.

Occasionally the train stops at an important mining town such as Elko, but certainly the tourist finds little to interest him at a passing glance, however important the industry represented by the place; and we are inclined to say, with the poet Dante, when, in his vision of the realms of despair, his guide took him through one most woful place, "Let us look and pass on with a shudder."

In the midst of this desert is Humboldt Wells, where there are thirty springs in a low basin half a mile west of the station. Some of the springs have been sounded seventeen hundred feet without touching bottom; and it is supposed that the series form the outlets of a subterranean lake. This oasis in the desert, with its pure water and excellent grass, was a source of great relief in the old days of overland travel. Humboldt Wells has a background, the Ruby Mountains, whose purple peaks



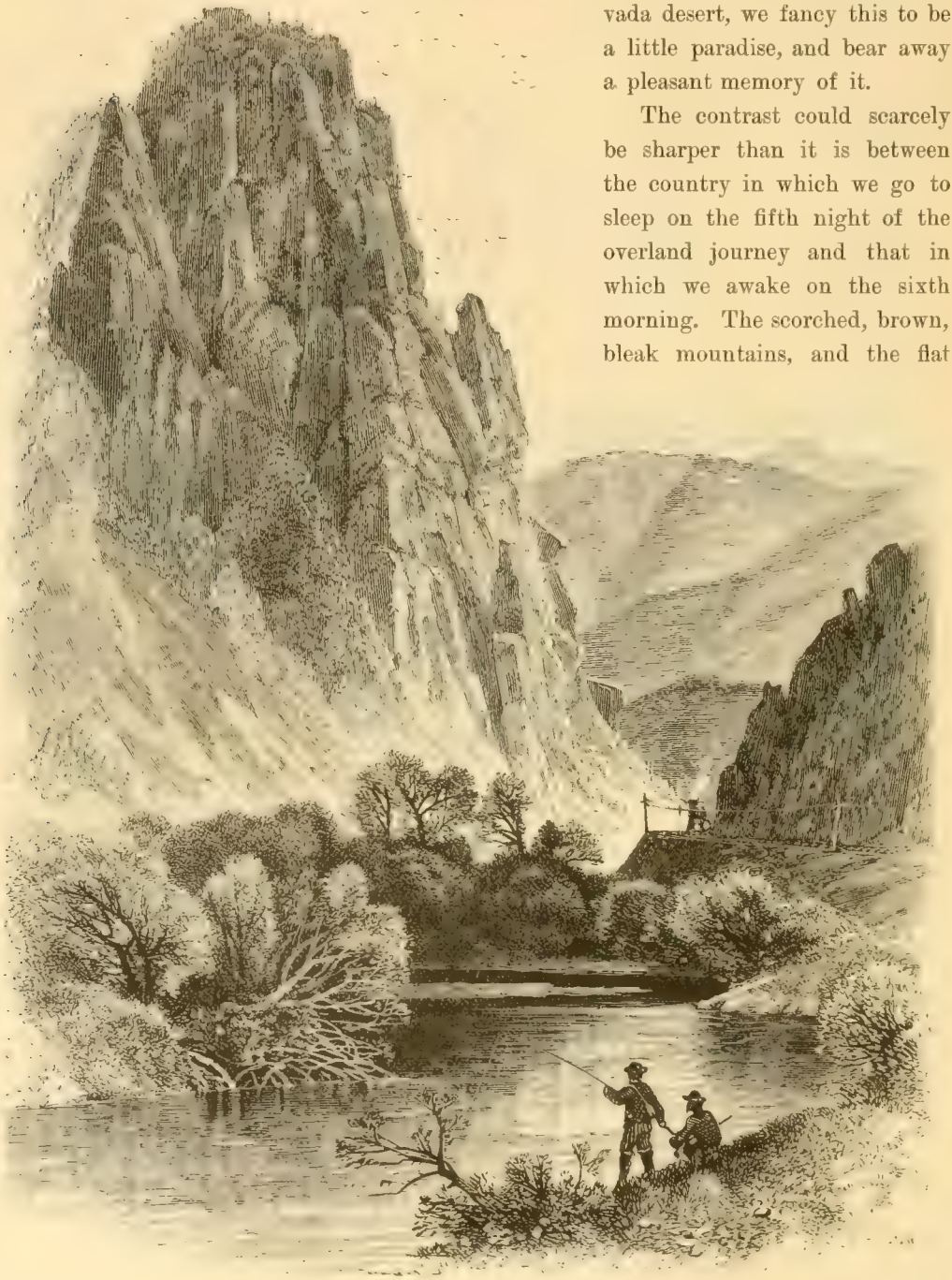
Humboldt Wells and Ruby Mountains.

stretch away in the distance. Beyond this the sterile monotony is resumed till we come to the magnificent cliffs known as the Humboldt Palisades, through which the train passes along the banks of a deep stream, which flows down from the mountains.

A pleasant exception, however, greets the eye at Humboldt. The desert extends from Humboldt in every direction—a pale, lifeless waste, that makes one understand the meaning of the word desolation; mountains break the level, and from the foot to the crest they are devoid of vegetation and other color than a dull gray; the earth is loose and sandy; nothing could surpass the landscape in its look of misery and barrenness; but here at Humboldt, a little intelligence, expenditure, and taste, have compelled the soil to yield flowers, grass, fruit, and shrubbery. Perhaps the grass is not greener at Humboldt than at any other place in the world; contrast may be the force that makes it seem so to the dust-covered railway-traveler; but we find it most abundant and grateful. A pretty fountain, in the pool of which gold-fishes disport, trickles and bubbles in front of the station hotel: on the east side there are locusts

and poplars; on the north vegetables grow, and an orchard bears good-looking and well-flavored apples. No wonder that, with our eyes smarting with the dust, bleakness, and barrenness of the Nevada desert, we fancy this to be a little paradise, and bear away a pleasant memory of it.

The contrast could scarcely be sharper than it is between the country in which we go to sleep on the fifth night of the overland journey and that in which we awake on the sixth morning. The scorched, brown, bleak mountains, and the flat



Devil's Peak, Humboldt Palisades.

plains of the Humboldt River, are replaced in the view from the car-window by the pine-clad Sierras; the misty blue of deep cañons; the content of pasture-land; the cold, brilliant surface of Alpine lakes; and the rosy and white tips of sharply outlined peaks. At sunset we were in a region silent and dreary beyond words, upon which the intrusion of a railway seemed without excuse, so far-reaching and unbroken was the barrenness. The sunset cast only a slight warmth on the blighted soil, and a small patch of reluctant green marked the pool in which a wide river disappeared. We have traveled steadily on through the night, stopping at a few stations, which hold on to existence by a thread; and passengers, awaking while the train has been still, have been startled by the complete stillness of these outposts. The drought and desert have spread as far west as the eastern slope of the Sierras; we have cut through the mountainous barrier by the cañon of the Truckee River, and have crossed the line which separates Nevada from California.

When the curtain of night is lifted, we are spinning around huddled foot-hills at an exhilarating height; the earth is densely green, the sky intensely blue, and the atmosphere full of vital snap. We are in the very heart of the Sierras, upon which the snow falls to a depth of thirty feet, and in which the immigrants of old met the last obstacle before reaching the golden lowlands of California.

Comparisons are suggested between the Sierras of Nevada and the Rocky Mountains, the latter being much superior in height, and rougher in form, while the former are more imposing in the view from the passing train; the railway threading them by more difficult passes than those near Sherman, by which the eastern range is crossed. Another point of contrast is in the vegetation. A scattering of stubby cedars and dwarf-pines, exhausted from the effort to sustain themselves, are the limit of greenness in that section of the Rocky Mountains penetrated by the railway; but in the Sierras the pines are many in number and huge in growth, streaking the steepest mountain-sides with their straight, inflexible shafts, and toning the landscape with their somber dark-green. Eighty, one hundred, and one hundred and twenty feet are not uncommon heights for those forest stoics, which seem to grow for the love of the mountains, independent of soil. Again, while the peaks are not so high, the track approaches them nearer than it does those of the Rocky Mountains, and the traveler may find himself among their snows when the lowlands are hot in August.

"For four hundred miles," says Clarence King, who has made extensive surveys of the region, "the Sierras are a definite ridge, broad and high, and having the form of a sea-wave. Buttresses of somber-hued rock, jutting at intervals from a steep wall, form the abrupt eastern slope; irregular forests, in scattered growth, huddle together near the snow. The lower declivities are barren spurs, sinking into the sterile flats of the Great Basin. Long ridges of comparatively gentle outline characterize the western side; but this sloping table is scored from base to summit by a system of parallel transverse cañons, distant from one another often less than twenty-five miles. They are ordinarily two or three thousand feet deep — falling at times in sheer, smooth-fronted cliffs; again in sweeping curves, like the hull of a ship; again in rugged,

V-shaped gorges, or with irregular, hilly flanks—opening, at last, through gate-ways of low, rounded foot-hills, out upon the horizontal plain of the San Joaquin and Sacramento."

We are now in the valley of the Truckee River, and approaching the end of the



Lake Tahoe.

long journey over the continent. Less than three hundred miles intervene between Reno, where tourists may diverge to have a look at Virginia City, one of the most interesting of Western mining cities, or at Lake Tahoe, and the city of the Golden Horn, which is our goal. It will not do for us to miss Lake Tahoe, which, in some

respects, is one of the great wonders of the continent. A brief ride of thirty miles on the Virginia and Truckee Railway to Carson, and thence by stage to the lake, the highest navigable body of water in the world except Lake Titicaca, in the Bolivian Andes, gives to the delighted eye a vision of great beauty.

After the stage has been toiling up-hill for two or three hours over a dusty road partly strung across a precipice, upon which grow a swarm of pines, firs, oaks, willows, and such brilliantly contrasted shrubs as the *manzanita*, with its bright crimson berries and brick-colored stalks, and the pale white thorn, that, by the side of each other, remind one of a bouncing country girl and a withered old man ; after a tiresome journey, each moment of which has widened the outlook and brought a more biting wind, with its strong smell of resin, against the face—we attain the top of the divide and behold two extensive and very different pictures.

With our gaze turned to the east, we see the smoky-red desert, with spiral columns of dust rising out of it—a relief-map washed with one color of lifeless brown ; the surface of the earth is crumpled with mountains to the extreme horizon, and the mountains have no other beauty, no other variation to their prevailing tint, than an occasional patch of snow. Now let us face the westward. Again there are mountains, a sharply outlined chain drawn from the farthest north to the farthest south. But these are of imposing height and varied coloring—blue, purple, olive, and gray. The flat, wide valley of Clear Creek is interposed, and beyond this Lake Tahoe is discovered—cold, lucid, quivering with light, and encircled by an edge of snow-tipped peaks. No view of the Sierras from the railway is so fair and impressive as this, which is one of the grandest in all the far West.

A rapid descent through a sunny cañon, thickly studded with pines and firs, brings us to Glenbrook, on the shore of the lake, and thence the water may be circumnavigated by means of a little steamboat, which makes daily trips between May and October. Tahoe is about twenty-two miles long and ten miles wide. One fourth of it is in Nevada, and three fourths in California. The circumference is about seventy miles, allowing for the winding of the shore. The water has been sounded to a depth of over sixteen hundred feet, and is marvelously clear. Near the shore it is a transparent emerald, flecked with the white of rounded granite bowlders imbedded in yellow sand, and in deeper places it is a blue—not such an indigo-blue as the Atlantic, but an unusual shade resembling the turquoise, its motion being as heavy as that of oil, and the low waves falling from the prow of a boat like folds of silk. There is a gloomy theory that the human body sinking in this serene depth is ingulfed forever, and it is a fact that the bodies of the drowned have never yet been found. Beautifully clear as the water actually is in the shallows—the boats floating upon it seeming to be suspended in the air as we look down upon them from the landings, and nothing save a thin sheet of glass seeming to exist between the eye and the bottom—it is apparently dense in the greater depths, a fancy which is only dispelled by the gleaming spots of a stray trout sporting at a depth of thirty or more feet. The lake is over six thousand feet above the level of the sea, and at times is

so fiercely ruffled by the winds from the mountains that navigation has to be abruptly closed.

It is also worth while for us, on returning from Lake Tahoe, to take a brief trip to Virginia City, which by rail is fifty-two miles from Reno, though a bee-line is only sixteen miles. So environed is Virginia City by massive mountains that the curves of the track necessary to compass a distance of only sixteen miles as the bee flies describe a circle of three hundred and sixty degrees seven times repeated, the cost of erection having been two million dollars. Virginia City has nearly half the population of the State, and is a place wonderful for its energy, its wickedness, its wealth, and brilliant show. Splendid dens of vice rise side by side with churches, banks, and fine private houses, and the devil is served with an open cheerfulness that knows no shame. Here are the famous mines of the Comstock Lode, known throughout the world for its enormous yield of the precious metals. The city is built across the face of the mountain, which rises two thousand feet above, and falls two thousand feet below it. The pitch of the ground is such that the first story of a house becomes a second or third story in the rear, and looking eastward, northward, or southward, we see an unbroken prospect of chain after chain of interlocked mountain-peaks. During the earlier days of Virginia City the red record of murders became so monotonous in its frequency that the newspapers, to save space, simply noticed them in the death-column, as, for example: "Buckskin Joe, aged twenty-five, cut to pieces with a bowie-knife yesterday, by Daredevil Pete"; "Daredevil Pete, aged thirty, hung by the Vigilance Committee last night. Pete had killed more than two dozen men."

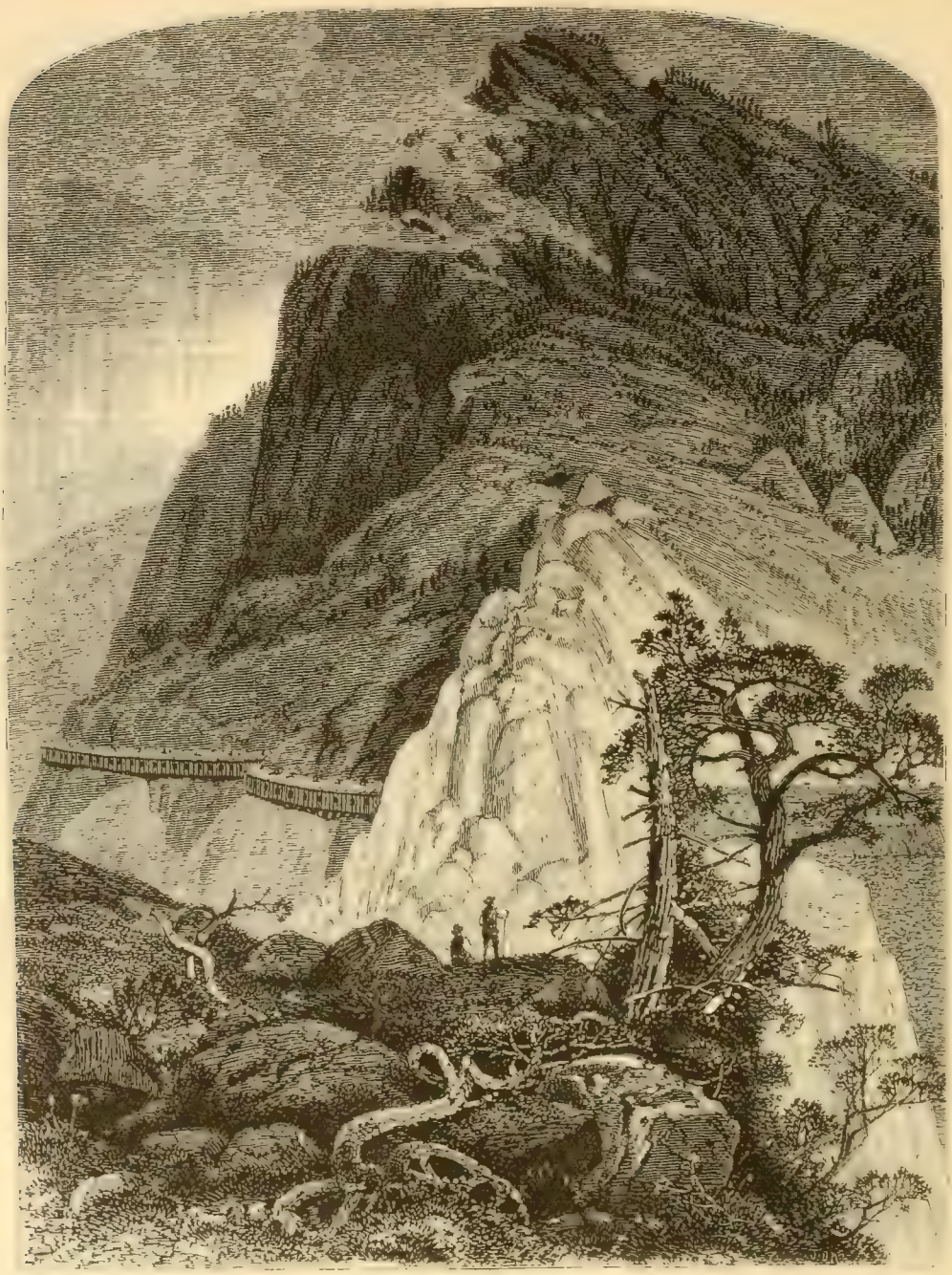
The people of Virginia City are excessively fond of display, very active in business, and hospitable. That rough-looking man with buckskin trousers, red shirt, and slouch hat, all covered with mud, is a dozen times a millionaire, and may yet be a United States Senator, though he can not speak a dozen straight words of grammatical English. The city is full of picturesque surprises, and is a most interesting study for one curious in the oddities of human nature. To show the energy of the people, it may be cited that in 1875 a fire swept the place from end to end, devouring ten million dollars' worth of property. Within six months the whole city had been rebuilt. Chicago is the only place we know which rivals this example of push and pluck. To guard against another such disaster the people of Virginia City built a series of hydrants and reservoirs, costing two million dollars, which fetch the water a distance of thirty-two miles. Now it is easier to drown out the city than to burn it.

Let us now resume our journey on the Central Pacific Railway to Truckee Station, where curiosity induces us to leave the train again and ride three miles to Donner Lake, a crystal sheet of water lying in the lap of the hills, with charming smaller lakes surrounding it. The origin of the name is a familiar story. In the winter of 1846–'47 a party of eighty-two immigrants were overtaken here by snow; their provisions gave out, and thirty-six perished. Among the survivors, when relief arrived, was a Mrs.



Donner Lake, from the Snow-Sheds.

Donner, whose husband was so ill that he could not be moved; she insisted upon remaining with him, and a man named Keysbury chose to stay with her. The others went to San Francisco, and when, in the spring, a party was sent to look for her,

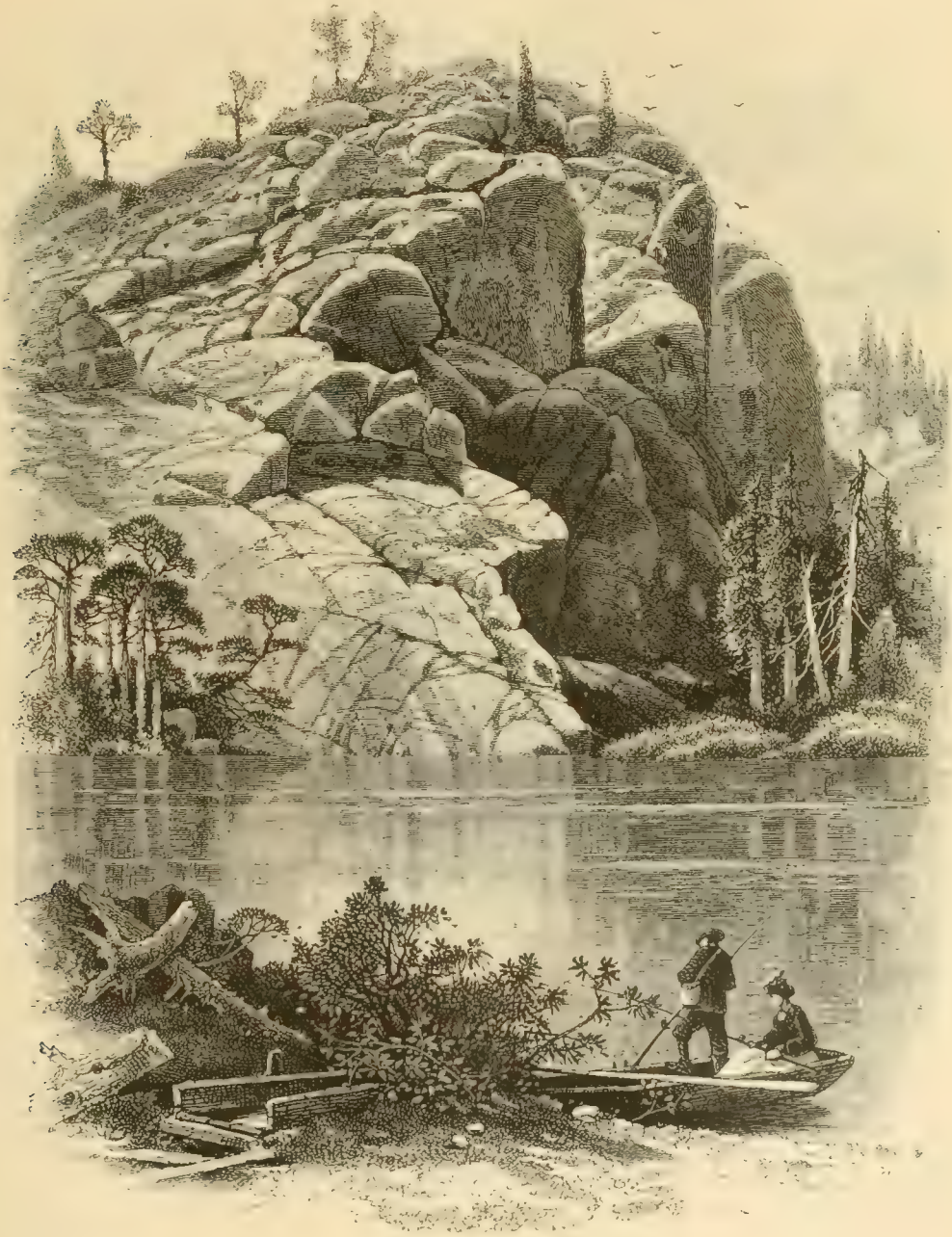


Donner Peak.

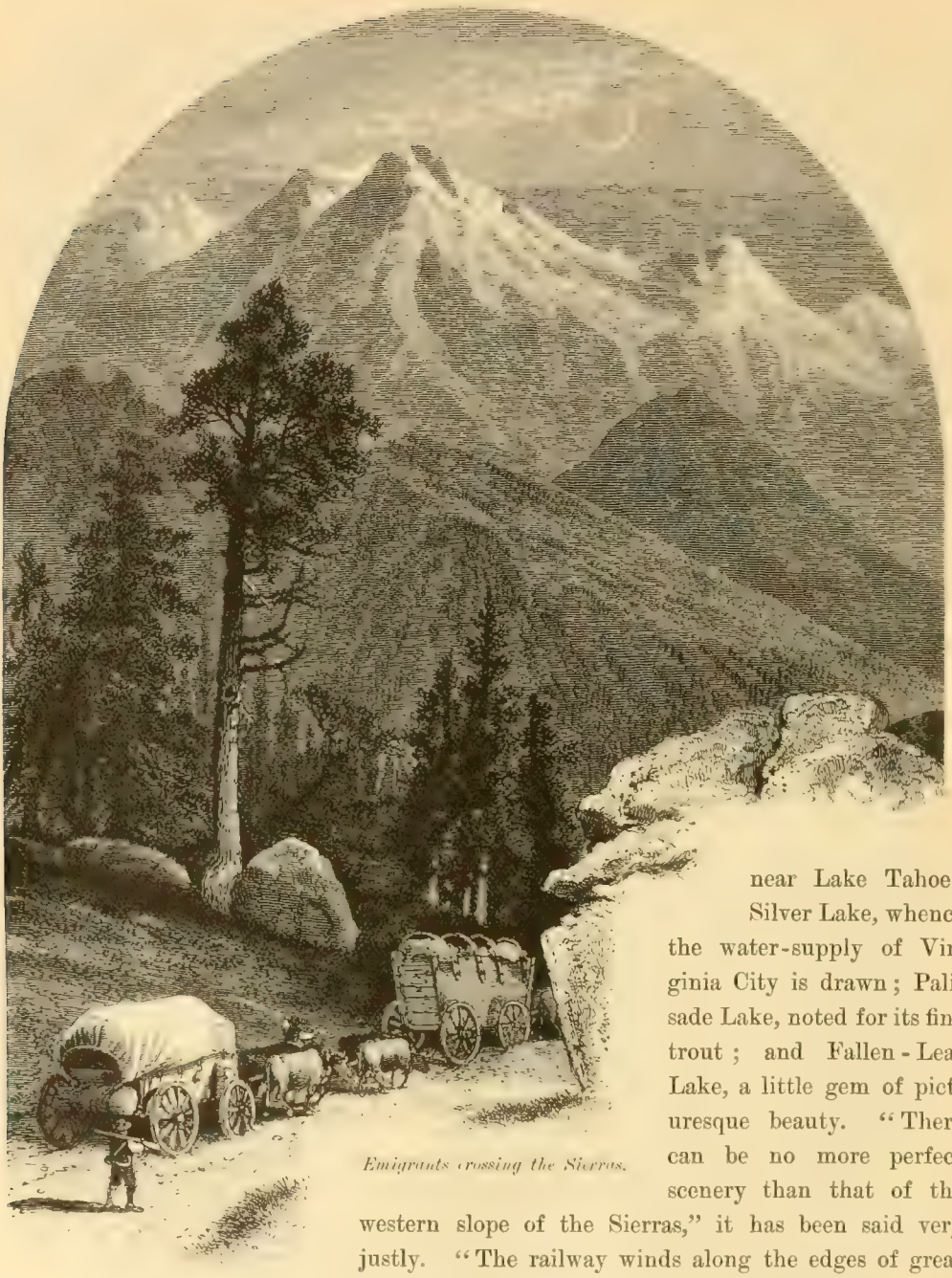
Keysbury alone was found alive, and living on her remains, his motive in staying with the Donners having probably been plunder and murder. A leading event in Bret Harte's novel of "Gabriel Conroy" was based on this tragedy, and the opening

chapter of the same work contains a very graphic description of a snow-storm in the Sierras.

Within a convenient distance are several other lakes, all of them offering attractions to the sportsman and lover of Nature. These are Lake Angeline; Cascade Lake,



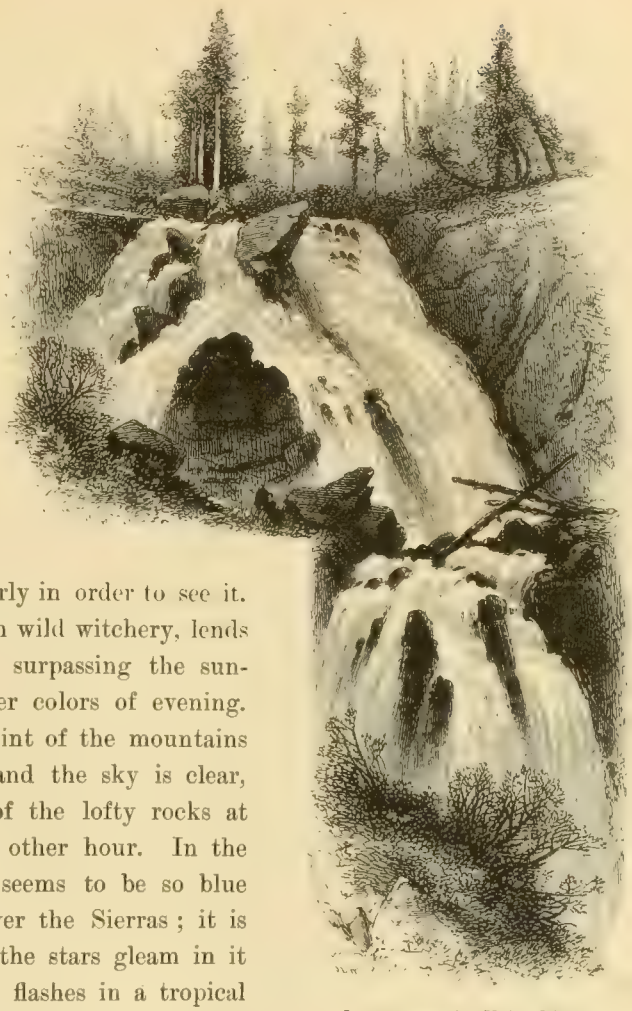
Lake Angeline.



Emigrants crossing the Sierras.

near Lake Tahoe; Silver Lake, whence the water-supply of Virginia City is drawn; Palisade Lake, noted for its fine trout; and Fallen-Leaf Lake, a little gem of picturesque beauty. "There can be no more perfect scenery than that of the western slope of the Sierras," it has been said very justly. "The railway winds along the edges of great precipices, and at sunrise the shadows are still lying deep in the cañons below. The snow-covered peaks above catch the first rays of the sun, and glow with wonderful color. Light wreaths of mist rise up to the end of the zone of pines, and then drift away into the air and are lost. The aspect of the mountains is of the wildest and most intense kind, for by the word intense something

seems to be expressed of the positive force there is in it, that differs utterly from the effect of such a scene as lies passive for the imagination. This is grand; it is magnetic; there is no escaping the wonder-working influence of the great grouping of mountains and ravines, of dense forests and ragged pinnacles of rock."

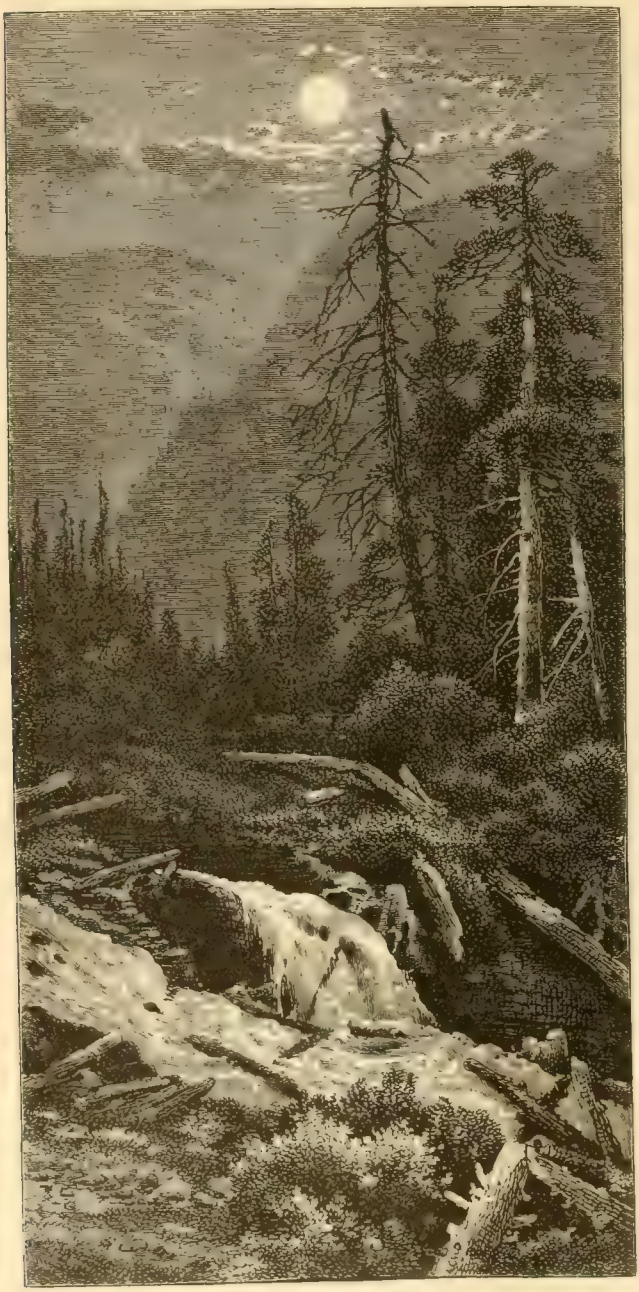


Lower Cascade, Yuba River.

But in winter the overland trains pass over this part of the journey long before sunrise, and in summer the passenger must leave his bed very early in order to see it. A moonlight night, however, with wild witchery, lends the greatest magic to the scene, surpassing the sun-glare of daylight and the stronger colors of evening. To stand on any commanding point of the mountains when the moon is at the full, and the sky is clear, reveals a charm in the nature of the lofty rocks at variance with their aspect at any other hour. In the first place, the sky itself never seems to be so blue and clear elsewhere as it does over the Sierras; it is almost the blue of daylight, and the stars gleam in it as thickly as the phosphorescence flashes in a tropical sea. The mountains are enveloped from peak to foot in a misty mantle of blue, and a sharp edge of light traces their outlines in the shifting vapor. Their bigness and weight are lost; massive as they are in reality, they seem to become mere shadows, and the snow on the summits is like the daylight breaking over them.

Two hundred and forty-four miles from San Francisco we reach the station of Summit, at the great height of seven thousand and seventeen feet above the sea, and thence the descent is made into the Sacramento Valley. The down grade is now one hundred and sixteen feet to the mile, and the train in many places, as it wheels around sharp curves, pitches and plunges wildly, alarming the more timid souls, who every moment expect to be dashed over a precipice. But the road is splendidly constructed, the engineer watchful and experienced, and the cars are solidly built, so there is but little danger in this headlong ride down the Sierra-sides, though it almost seems like challenging Fate.

West of Truckee the snow-sheds become more frequent, and in one case they are continuous for twenty-nine miles. They are of two kinds, the flat roofs built to hold the weight of twenty-five or thirty feet of snow, and the steep roof designed to slide it down the mountain. In some cases the cost of building these protections from the storms of winter was thirty thousand dollars a mile. So we may get some idea of the vast amount of money which it took to complete the railroad connection across the continent. There are charming spots within a short distance of the road, among which are Kidd's Lakes, which pour into the south branch of the Yuba River, and gorge of that river whose striking bluffs are called the New Hampshire rocks. Should we be beguiled into visiting all the picturesque spots lying within easy distance of the road on the western slope of the Sierras, our journey to San Francisco, though apparently drawing to an end, would be prolonged for weeks.



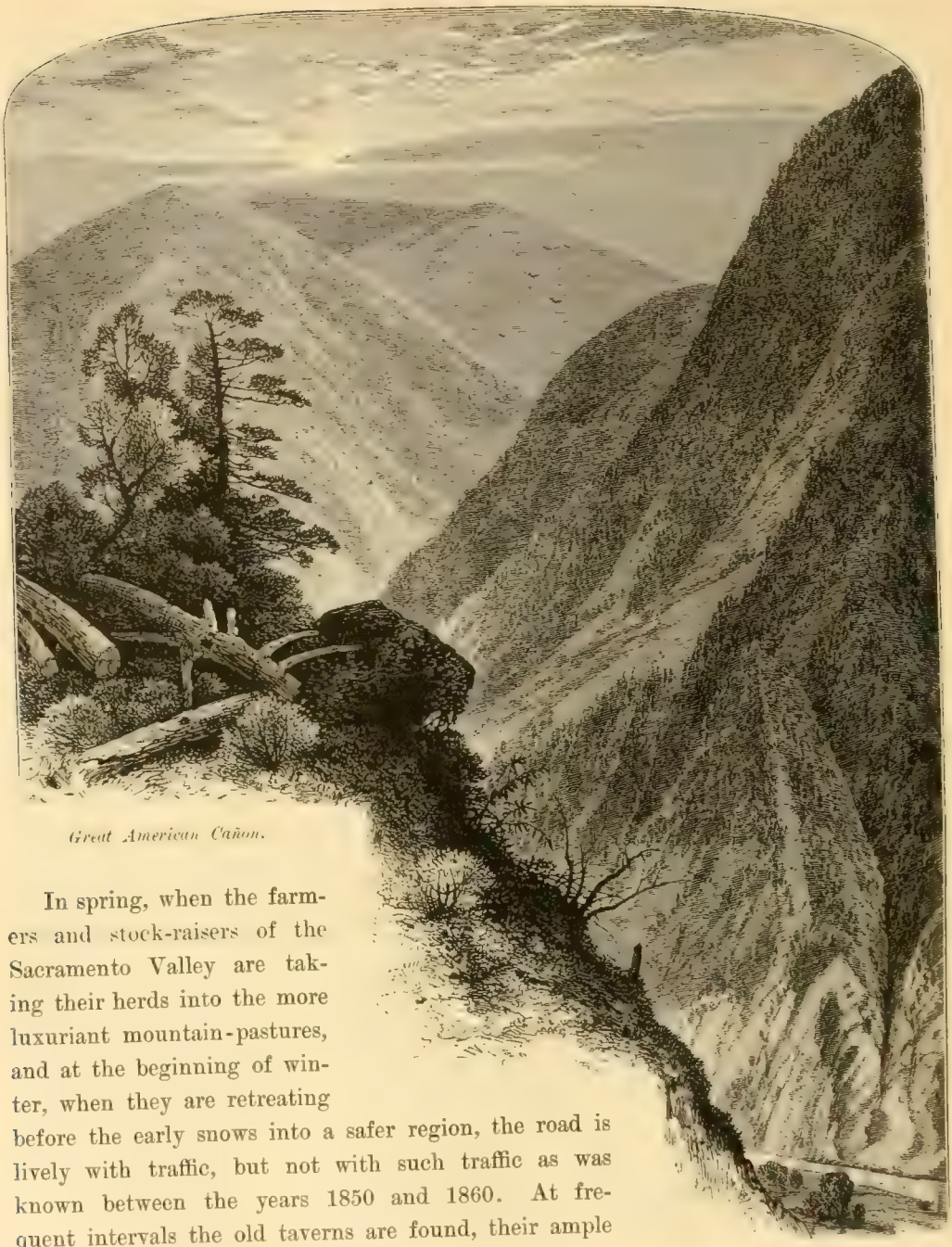
Cedar Creek, Blue Cañon.

A point worthy of notice is called Emigrants' Gap, a trying passage in the days when the only vehicles that crossed the Sierras were the canvas-covered wagons of the pioneers, and the parlor-car was an undreamed-of luxury. The old emigrant-road, which occasionally edges on the railway, is not wholly deserted yet. The capacious wagons, with their arched roofs of white canvas, loaded ten feet high with furniture and stores, are now and then seen toiling



Giant's Gap, American Cañon.

along at a pitifully slow rate, a small herd of cattle following, and the youngsters of the family running a long way ahead, and skirmishing among the bordering woods for squirrels, or anything else to shoot at.

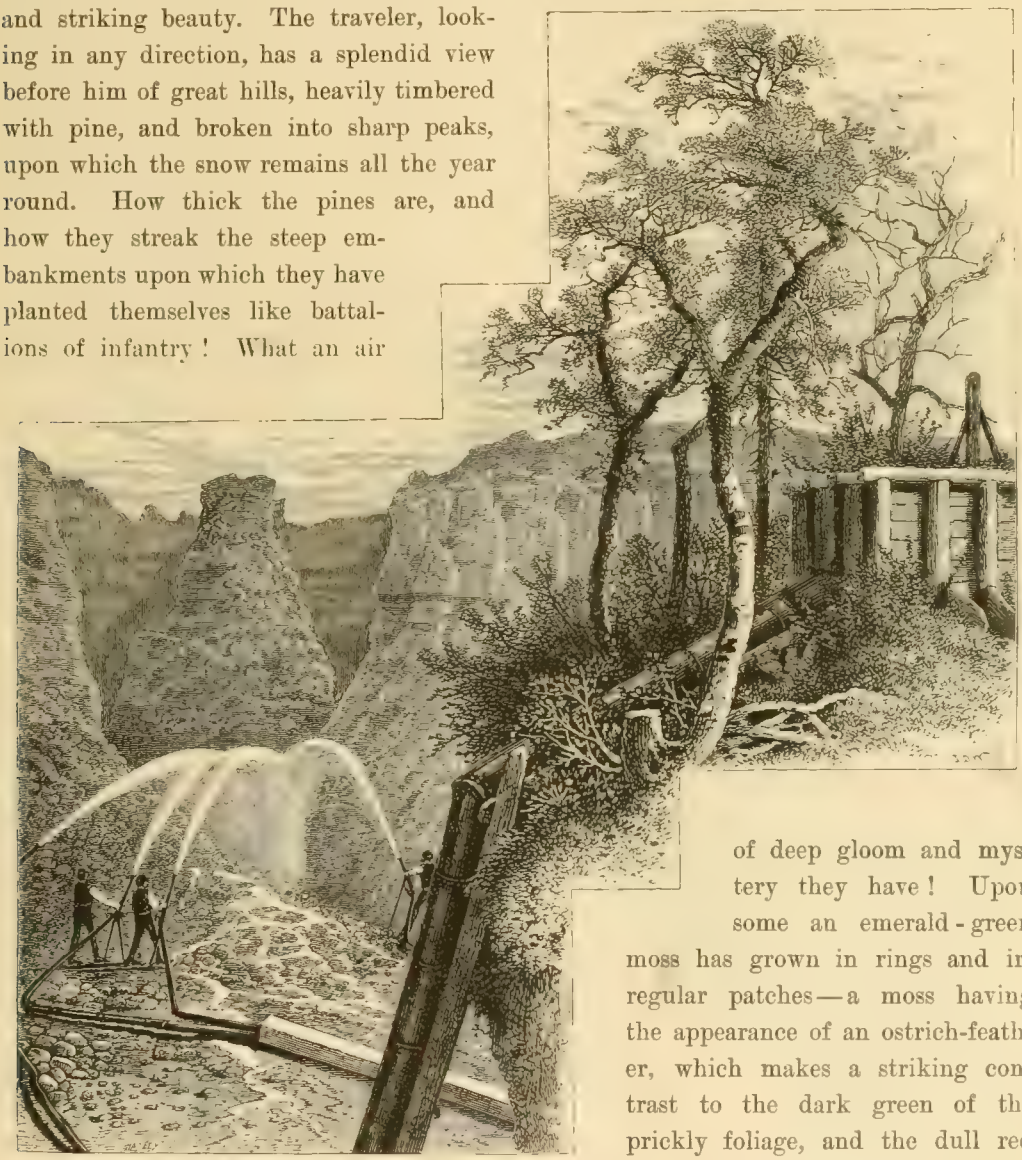


Great American Cañon.

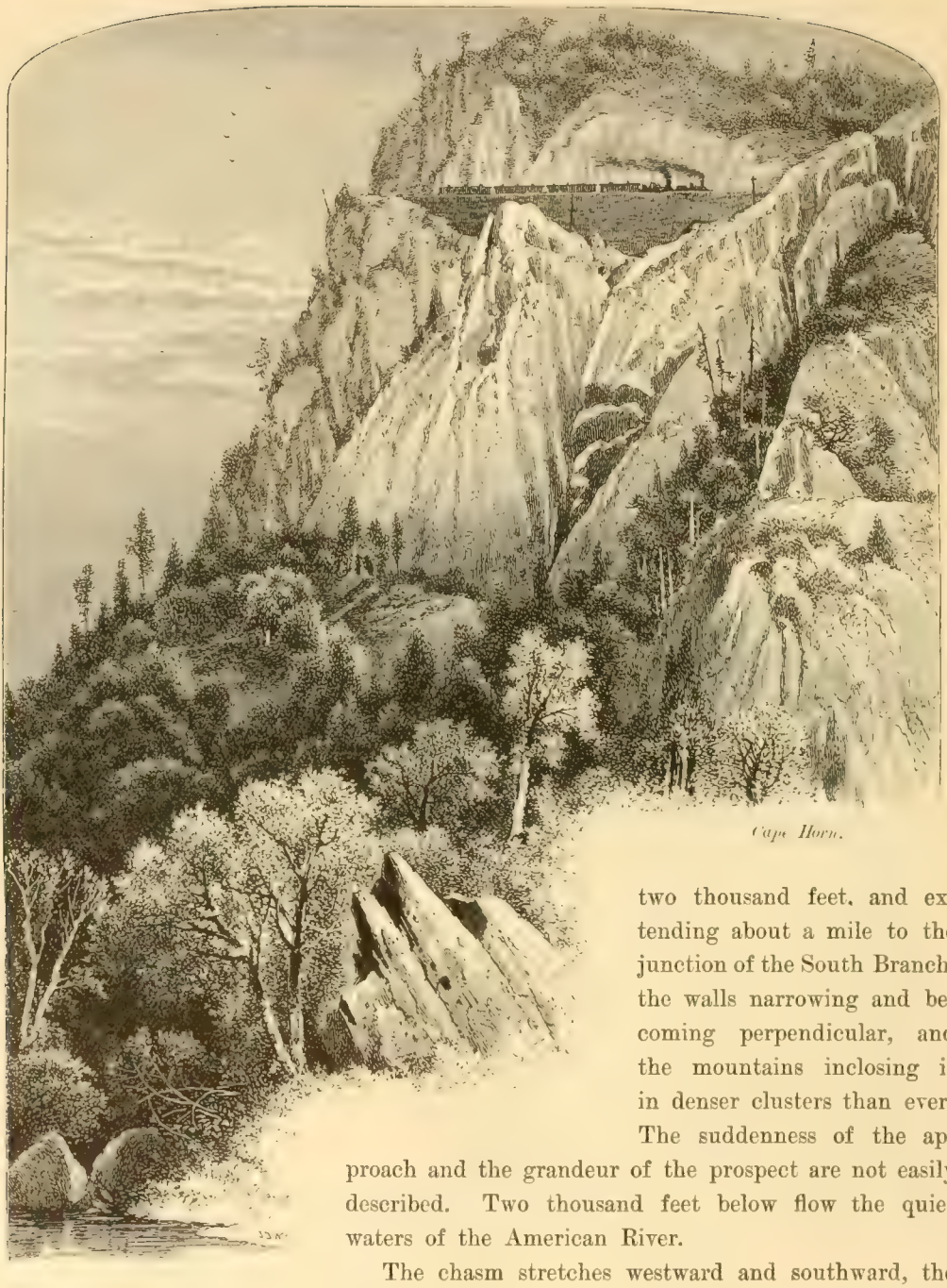
In spring, when the farmers and stock-raisers of the Sacramento Valley are taking their herds into the more luxuriant mountain-pastures, and at the beginning of winter, when they are retreating before the early snows into a safer region, the road is lively with traffic, but not with such traffic as was known between the years 1850 and 1860. At frequent intervals the old taverns are found, their ample apartments vacant, the windows and doors out, and the bar-room only remaining. This is an example of the "survival of the fittest," for the lonely red-shirted dispenser of bad whisky, though he has the house to himself, still finds custom for the fiery stuff which fills his decanters. At the Gap the road makes quite a sharp descent, in which the emigrant-wagons were formerly low-

ered by means of ropes that were fastened to the pines, which here are of immense girth and height.

At various points along this portion of the road are saw-mills and shipping points for lumber. One of these is Blue Cañon, through which runs a wild, brawling torrent called Cedar Creek, a place of bold and striking beauty. The traveler, looking in any direction, has a splendid view before him of great hills, heavily timbered with pine, and broken into sharp peaks, upon which the snow remains all the year round. How thick the pines are, and how they streak the steep embankments upon which they have planted themselves like battalions of infantry! What an air of deep gloom and mystery they have! Upon some an emerald-green moss has grown in rings and irregular patches—a moss having the appearance of an ostrich-feather, which makes a striking contrast to the dark green of the prickly foliage, and the dull red of the bark. In the distance the pines are blue, and at night they are intensely black. Blue Cañon is the snow limit, and the water is considered the purest and best in the mountain. A few miles farther comes Giant's Gap, one of the grandest scenes on the road. A great chasm appears, worn by glaciers to a depth of



Hydraulic Mining, Gold Run, California.



Cape Horn.

two thousand feet, and extending about a mile to the junction of the South Branch, the walls narrowing and becoming perpendicular, and the mountains inclosing it in denser clusters than ever. The suddenness of the approach and the grandeur of the prospect are not easily described. Two thousand feet below flow the quiet waters of the American River.

The chasm stretches westward and southward, the distance broken by regiments of peaks on which the pines swarm in forests, steeped in endless twilight. The evidences of the great ice-glaciers grinding and polishing the rocks at an ancient period are numerous. "Looking from the summit of Mount Diablo, across the San Joaquin Valley," a scientific

man of California has written, "after the atmosphere has been washed with winter rains, the Sierra is beheld stretching along the plain in simple grandeur, like some immense wall, two and a half miles high, and colored almost as bright as a rainbow, in four horizontal bands—the lowest rose-purple, the next higher dark-purple, the next blue, and the topmost pearly-white—all beautifully interblended, and varying in tone with the time of day and the advance of the seasons. The rose-purple band, rising out of the yellow plain, is the foot-hill region, sparsely planted with oak and pine, the color in a great measure depending upon clayey soils exposed in extensive openings among the trees; the dark-purple is the region of the yellow and sugar pines; the blue is the cool middle region of the silver-firs; and the pearly band of summits is the Sierra Alps, composed of a vast wilderness of peaks variously grouped and divided by huge cañons, and swept by torrents and avalanches. Here are the homes of all the glaciers left alive in the Sierra Nevada."

All along the Sierra-slope the waters are used for mining purposes, being conveyed by ditches and flumes when the streams do not run in the right course. Placer-mining and hydraulic mining are much the same thing on a different scale. With a pick, a spade, and a dust-pan, his complete outfit packed on the back of a tiny *burro*, or donkey, the poorest miner can go into the mountains, "prospect" the rocks, and, if he strikes a rich lead, work it alone until it is exhausted or the water drowns him out. Then he prospects further, or enlists capital, which is used in building a quartz-mill and pump over the mine. The bullion "dirt" which he finds in his first operations is put into tin or iron vessels called dust-pans, over which a stream of water is allowed to flow; when it is completely saturated, it is stirred, and the bullion gradually settles to the bottom, the top dirt being poured off from time to time, until nothing remains except the gold and silver, and a fine black sand, which is afterward separated from the precious metals by a magnet. The rocker or cradle is another machine, of very simple design, used in winnowing gold and silver. It is literally a cradle. The dirt is thrown in upon a screen at one end; water passes over it, and, after setting the gold free, which falls to the bottom, carries the worthless dirt away. The "long Tom" answers the same purposes. It is a box or a sluice, into which the dirt is thrown and carried by a stream of water to a screen at the end, where the gold settles to the bottom. The sluices are sometimes very long, and several of them are ranged side by side; what appear to be streams of gray mud are constantly flowing through them, and at night the strong rays of a locomotive head-light are thrown upon them to prevent stealing. The deposits of gold-bearing dirt are occasionally several hundred feet deep, and the pick and shovel give place to a hose, which tapers from a diameter of eight inches at the butt to two inches at the orifice, and from which a jet of water is thrown upon the embankments of earth with such force that immense bowlders and tons upon tons of earth are displaced. A country thus torn and bared by hydraulic mining has an exceedingly ragged and repulsive appearance. When gathered in quantities, the ore is treated in the quartz-mills, and the result is delivered to the mints in bullion-bricks.

As we speed along, watching with intent eye the succession of interesting objects on the route, a sudden excitement is evident in the car. Even the old traveler, who has gone over the route many times, wakes from his sleepy indifference. The train is approaching Cape Horn, one of the grandest efforts of Nature in a region of grandeur. The Cape is a precipitous bluff rising to a height of over two thousand feet above the river-level, and the ledge along which the railway is carried was so



Lake Merritt, Oakland.

inaccessible that the first workmen had to be lowered from the top of the cliff by ropes. Standing by the river-side we should see the rugged wall of rock reaching toward the sky; great bowlders and a few twisted evergreens cling to the crumbling face of the huge, naked precipice; and the train, spinning along the frail ledge under the trail of its own smoke, would be dwarfed by the height above and below it to the likeness and size of a snake.

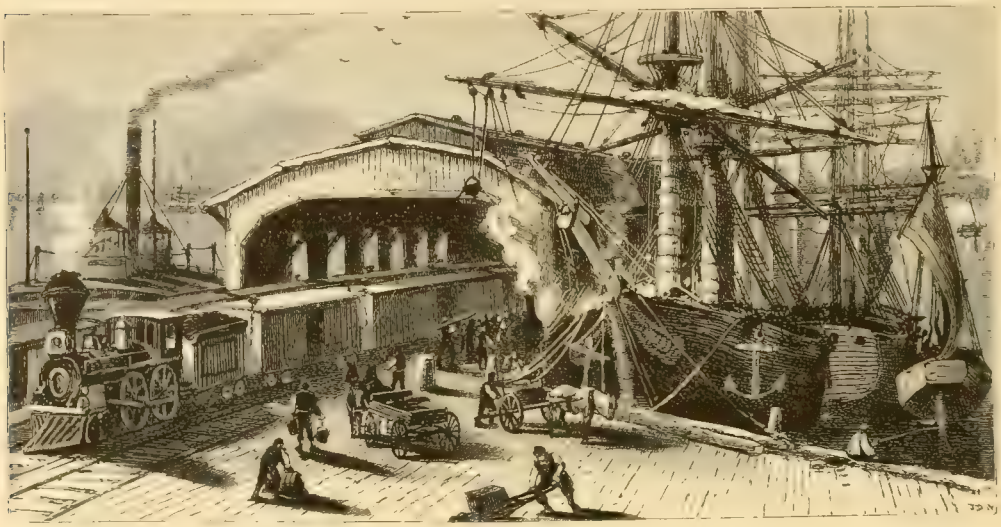
Swiftly the train darts down the steep slopes after it has rounded Cape Horn, and



San Francisco, from Goat Island.

in an hour's time we have descended into the valley of the Sacramento, and find ourselves in the heart of California. Settlements become frequent; the aspect of the country is mild and peaceful, and orange-groves grow luxuriantly everywhere the eye turns. It is a scene of exquisite peace, beauty, and contentment, which soothes the

mind after the rugged and sublime aspects of Nature through which we have so recently passed. Flowers crop out in profusion everywhere, and the fertile soil shows



Central Pacific Wharf.

its richness in all kinds of wonderful productions. The atmosphere is no longer the same as in the interior of the continent. There is nothing of the translucent clearness, nothing of the wonderful light which kills all sense of distance. It is like the

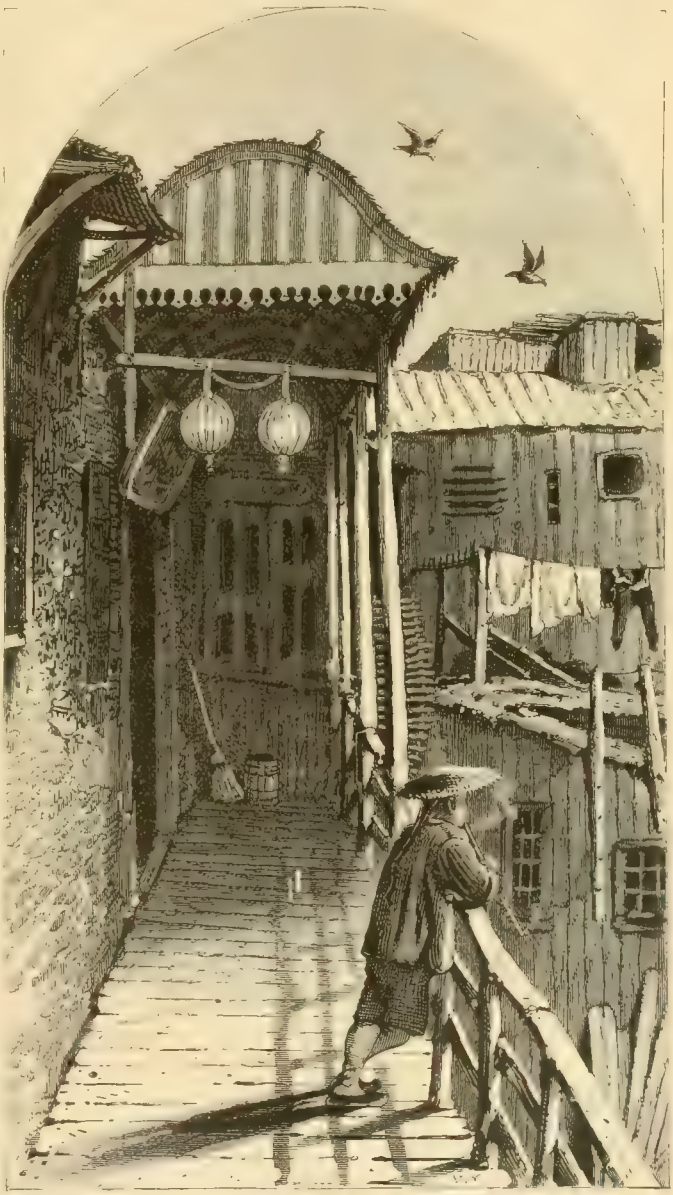


The Cliffs, and Cliff House, San Francisco.

soft sky of Spain or Italy, with a blue, hazy horizon mingling with the purple curtain of the mountains.

About noon of the fifth day out from Omaha the train rolls into Sacramento. The city has broad streets, lined with charming villas and cottages, and shaded by handsome trees. The Capitol building is a noble structure, with a front of three

hundred and twenty feet, and a height of eighty. The dome is two hundred and twenty feet high, surmounted by a temple of Liberty and Powers's bronze statue of California. We may go from Sacramento to San Francisco by boat, but, as we have come through overland, we will finish the journey by rail. The country which we traverse is fertile almost beyond rivalry. Far reaching cattle-ranches are varied by vineyards and orchards. Fruits and flowers are as common as in the tropics, and yet the climate is moderate. Beautiful villas and neat farm-houses dot the landscape everywhere. Lavish prosperity appears to have scattered its blessings with open hands.



Chinese Quarter, San Francisco.

We ultimately reach our terminus at Oakland, where we are transferred across the bay in luxurious ferry-boats to San Francisco. Oakland is richly embowered in foliage, and is one of the most beautiful suburbs in the world. Here many of the richest men of San Francisco have their homes, and wealth has been profusely employed in beautifying the place. Every house is surrounded by charming grounds and flower-gardens, the drives are delightful, and in Lake Merritt the residents have a beautiful sheet of water in their very midst.

The Bay of San Francisco, which we cross by ferry-boat, is large enough to harbor

the combined navies of the world, and it is bordered by mountain, city, and plain. As we leave the Oakland wharf we see Goat Island on the right—a military reservation; the Golden Gate is northward, and Alcatraz, a naval station, is at the end of the gate. Angel Island, north of Alcatraz, is another military reservation; and northwest of this the towering peak of Mount Tamalpais may be seen. Southward, the view extends over the bay toward San José; and everywhere, except where the city stands, and through the Golden Gate, it is shut in by mountains.

In San Francisco we are landed at the Market Street wharf, where transfer-vehicles are ready to convey us in any direction. The population of the city is about two hundred and seventy-five thousand; it covers a territory of forty-two square miles, and those forty-two square miles are said by the inhabitants to comprise a larger proportion of wealth, beauty, and intellect, than the same area in any other city. San Francisco is undoubtedly very charming. Its people are lavish in their hospitality and in all their expenditures; the hotels are palaces; the places of amusement are numerous and liberally conducted. There are two systems of streets, Market Street being the dividing-line. The wholesale business of the city is done along the water-front and north of Market Street; and retail business of all kinds is found in Kearny, Montgomery, Third, and Fourth Streets. The sidewalks are wide, and are principally of wood, though some are of asphalt and stone. The roadways are of various materials. One noticeable feature is the number of bay-windows in the houses, which, however agreeable they may be to the occupants, are often not so judiciously arranged as to avoid spoiling the architectural effect. Among the pleasure-resorts of the city are the Seal Rocks, at the mouth of the Golden Gate, where, from the balcony of the Cliff House, seals may be seen disporting; Woodward's Gardens, a combination of museum, menagerie, theatre, aquarium, and botanic garden; Lake Merced; and Golden Gate Park, which embraces about eleven hundred acres. Within the city is the Chinese quarter, which presents some very interesting studies.

The proud inhabitants of the metropolis of the Pacific coast are wont to say that its forty-two square miles include more wealth, beauty, and brains, to the area, than any other city. With this swelling vaunt on the part of the people of the city of the Golden Gate, we will pass from the subject, except to refer the reader to the illustrations we give of San Francisco and its surroundings.

We have thus crossed the continent from Omaha to the Pacific Ocean, and have found the scenery of the Pacific Railway to embrace examples of nearly all the striking and curious phases of Nature to be found in the Western country—the fantastically carved sandstones, the Bad Lands, the sage-plains, the wonderful cañons, and the various kinds of mountains. The trip is often tedious, but the few hours spent in crossing the Rocky Mountains, in descending Echo and Weber Cañons, in winding among the colored rocks of Green River, and, finally, in cutting the Sierras, repay us many times over.



New Tacoma, Mount Rainier in the background.

A GLIMPSE OF THE FAR NORTHWEST.

Characteristics of scenery in Washington Territory—Luxuriant primitive beauty and wildness—Strange mixture of civilization and barbarism—The principal towns of the Territory—Early traditions and history—Forests, lakes, and mountains—The future of Washington Territory—Characteristics of the water-falls of the far Northwest—Cascades and cataracts in Oregon—Snoqualmie Falls, Washington Territory—Shoshone Falls, Idaho—Sioux River Falls—Falls of the Missouri.

THE tourist who has exhausted all the charming scenery of the United States that is easy of access, and visited the many beautiful landscapes which please the eye of the European traveler, must not believe that Nature has but little more to offer him. He will speedily learn how the universal Mother pours out her wealth of resources in forms of fresh and fascinating interest, by turning his footsteps to that grand domain adjoining the Pacific Ocean, and stretching far into the interior, known as the "Far Northwest." Here he will find a region larger than all Europe, Russia excepted, which is to-day practically an unknown land; an area which in charm of climate,

beauty of color, variety of pastoral scenery, extent of forests, nobleness of rivers, and grandeur of mountains will compare with any in the world, go where he may. Plant-life presents new and strange forms growing in tropical profusion, and the animals almost compare with those of Central Africa in abundance. Nature has showered her blessings most freely throughout the whole region, for not only has she spread abroad the most delightful and varied scenery, but the soil is so lush and warm that it only needs to be "tickled with the hoe to laugh with the harvest." It would not much overstate the fact to assert that the most charming features of other parts of the world are here combined to form a panorama expressing every type and emotion of scenic beauty. Washington Territory is, perhaps, the most attractive section of this noble region. Its undulating face shows us the rolling prairie, the high plateau, the picturesque dingle and the deep forest, the murmuring brook and the majestic river, the sloping beauty of hill-sides and the snow-clad crests of towering mountain-ranges.

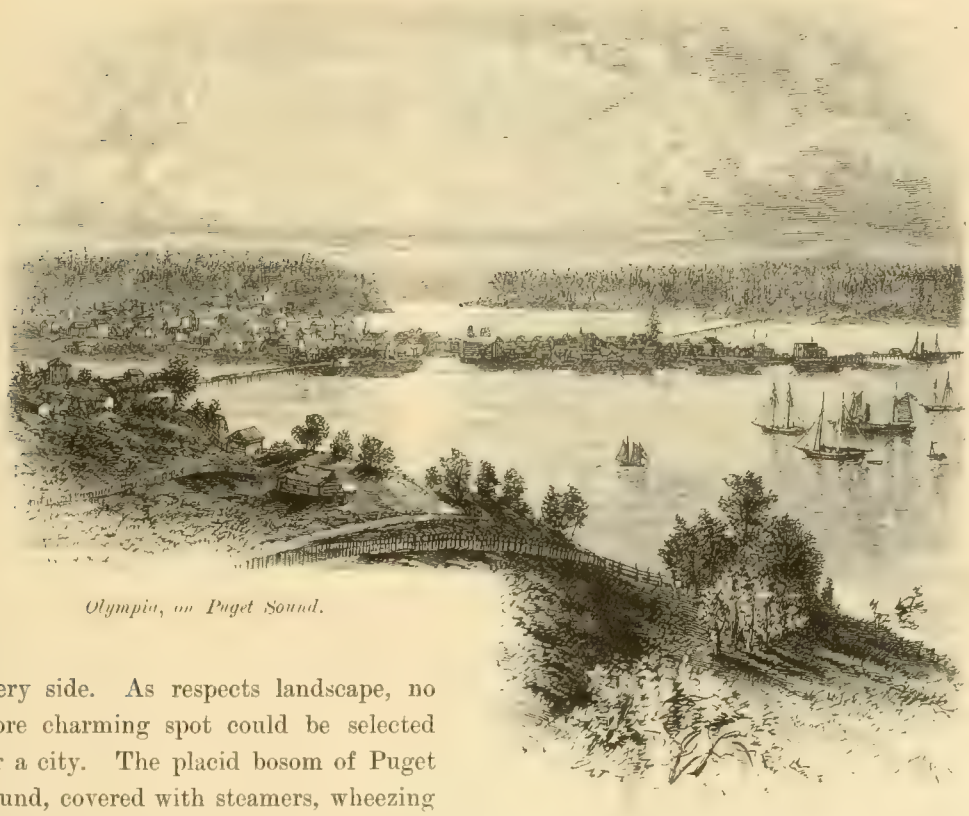
Let us take a short journey through this grand Territory, beginning at Kalama, a hamlet on the Columbia River about a hundred miles from its mouth. This town was laid out at the height of the Northern Pacific Railway excitement in 1870, and it was predicted by prophets who had land to sell that the town would soon blossom into a city which would make San Francisco look to her laurels. Everybody was wild with speculation, and people thronged from all parts of the country to buy a foot or two of the precious soil. Houses sprang up like magic in this El Dorado that was to be, and great prices were paid for small town-lots. But the bubble burst, and the town which had suddenly grown to a population of several thousands sank to as many hundreds. It has still, however, some importance as the terminus of the Puget Valley Railroad. Here we are booked for a trip to the northern part of the Territory.

The train consists of a locomotive and one car, and we find it taken up by a very small and select company, among whom may be mentioned a Chinaman, an Indian half-breed, an ugly Flathead squaw, and a German immigrant family, whose greenish-yellow hair and skim-milk eyes contrast most strongly with the coarse dark hair and tawny faces of their companions. This curious commingling of races suggests to us the lion and the lamb lying down together, though one fancies that the squaw eyes the Celestial in a way to show that she would not object to adorning her person with his long and well-braided cue.

We pass through forests which show the luxuriance of Nature in her primitive condition. The lofty firs with their tapering forms tower up to a height of four hundred feet, presenting a funereal aspect in their garb of gloomy green; but here and there a gay dingle of white-blossomed shrubs, bright-green maple, or graceful ash appears and relieves the monotonous hue of the evergreens. One characteristic of the vegetation is the brilliant coloring of the flowers which are of the most gaudy hues, generally of a bright red or of a glaring yellow. After traveling about forty miles, we take stage and go across-country fifteen miles away to Olympia, which is the capital of the Territory. One mile before reaching this city we pass through the picturesque and thriving village of Tumwater, which is the possessor of a charming little water-fall, known by the

sweet-sounding Indian name of Tumchuck, or "Sounding-Water." It comes bounding over a rocky ledge green with mosses and gay with wild flowers, and tumbles into a basin filled with miniature waves of foam. The active villagers do not let it rest in idleness, for they have built factories along its course, and its liquid sound is mingled with the sharp buzz of lumber-saws and the noisy splash of mill-wheels. Through the broad central street of Olympia our stage dashes with a rattle that brings all the loungers and idling merchants to the door to see the new arrivals.

The place has a population of two thousand, and is situated on Budd's Inlet, an arm of Puget Sound. It is almost surrounded by water, while forests guard it on



Olympia, on Puget Sound.

every side. As respects landscape, no more charming spot could be selected for a city. The placid bosom of Puget Sound, covered with steamers, wheezing tugs, and white-sailed boats, lies directly in front; on both sides of the sound dense forests, that extend to the horizon in every direction, greet the vision; while far to the north towers the Olympic Range, whose snowy crest competes with the heavy masses of fleecy, cumulus clouds for supremacy. This grand scene, illumined by the mellow light of the evening sun, produces a picture which can not be excelled in color, breadth, or motion. It presents, at a glance, contrasts of light and shade, tranquillity and energy, action and repose; yet all blend harmoniously together. At night the pictorial effect is somewhat enhanced, for at high tide the water forms several canals through portions of the suburbs, and



Cascade Range, from Puget Sound.

this reflects, with the most minute accuracy, the scintillating lights of the city; even persons passing along its shores are seen in the mirrored sea as if they were walking on the star-dotted sky. On moonlit nights the heavy forests, changed into spiral wreaths of foliage, and the snowy range, nearly two hundred miles to the north, are reflected with photographic minuteness, so that a person need scarcely move from his piazza to behold one of the grandest scenes imaginable.

The city, so charming in its surroundings of scenery, possesses a most agreeable climate, for during the hottest season of the year, July and August, cooling breezes from the snow-clad mountains and the frigid waters of the sound fan the air to a delicious freshness, which leaves one nothing to desire. One can always sleep under blankets, and the twilight lasts so long that one can read till nearly ten o'clock at night without lighting the lamp. If we would revel in what the Italians call the "sweet doing nothing," there are few places more attractive. Here may be enjoyed all the pleasures of the rod and gun, for one needs only to go a mile or two out of town to try his rifle on bear or deer, while grouse and other game-birds are so plenty in season as to be easily killed

with sticks and stones. The sound and every stream pouring into it swarm with fine fish, and the sportsman can hardly go amiss.

The contrast of civilization and barbarism in the Indian villages scattered along the beach is very amusing. The "noble red-man" spends his time in lordly idleness, and condescends to sell the products of his squaw's industry, with which he may hie to some spot where he can purchase of that elixir which is his "open sesame" to an earthly paradise. The result is, that Indian war-whoops and demoniacal yelling, worse than a million cat-concerts, disturb the serenity of the night very often, and cause the pale-faces to spend much of the time which ought to be consecrated to sleep in breaking the second commandment.

The presence of the Indian population in this locality has affected the conversation of the whites to such an extent that the stranger would be at a loss to understand many of their terms. It is not unusual, for instance, to hear a young lady, who patters her French glibly, say that *hiyou* persons attended the last sociable; that Mr. Smith is a great *tyee*, or chief, in society; that the Browns are *elip tillicums*, or of the first families; that a certain spot is a good picnicking *illahee;* or that the last concert was a *closh* musical *wa-wa* — a good concert. The word *chuck* is the most frequent term for water among the pioneers, and *tyee* for some local celebrity. All the old citizens speak the Indian tongue, known as the Chinook, as fluently as the natives themselves. This language, which is formed of Indian, English, and French words, was originated by the Hudson Bay Fur Company, in order that the coast tribes might have one language, which traders could understand. The result of their linguistic efforts is, that any person now who speaks the Chinook can travel among the Northwestern tribes with facility, as all, except the very old people, will readily understand him. The missionaries have also found it useful in giving instruction in Christian doctrines, and nearly all their sermons are now delivered in that language. The most popular hymns have been translated into Chinook, and the red-man, when not too much absorbed in the hunt after fire-water, loves to troll these religious ditties, which are often curiously mixed up with profane sentiments. For example, an Indian may be sometimes heard singing ecstatically how little he cares for only one bottle of whisky; then suddenly plunge into a prayer to Omnipotence to give him his daily bread, and a seat in the heavenly Zion after death.

A run of twenty-four hours on the steamboat brings us to the hamlet of Steilacoom, which is charmingly situated in the midst of flower-clad prairies and beautiful groves, that look as if they might have been arranged by a landscape-gardener. All around, within a few miles, are pretty lakes, whose pellucid waters swarm with fish and wild-fowl. In the distance may be seen the shining peaks of the Cascade Range clad with eternal snows. The town has some historical importance. It was here that General Harney dispatched Lieutenant Pickett, since noted as a Confederate general, to seize San Juan Island, then claimed by Great Britain.

The pioneers are wont to relate stirring anecdotes of these times with great gusto. When Lieutenant Pickett took the Island of San Juan, the pompous British com-

mander threatened to land soldiers from the English fleet, and capture his miserable fortification. The American replied that the other was able to carry out his threat, but it would be at the expense of many a red-coat's life. His careless and easy bearing led to a prudent inactivity on the part of the Britons, and the island was afterward ceded peacefully to the United States. When the island was for a time occupied conjointly by the two nations, magistrates were appointed by both to mete out justice to all. But the dignity of the British officials was so shocked by the conduct of their American brethren on the bench, that they soon retired from such vulgar company. We are told that the English judge appointed to the island circuit, impressed with his own importance, appeared in court in faultless attire, and wearing the most fashionable gloves. His Yankee brother, on the other hand, had on a suit of rusty gray, a collarless flannel shirt, and his large and horny hands had never known any other covering than a coating of dirt. The Britisher could hardly stand such company, but a severe sense of duty kept him at his post. Finally, a last straw broke the camel's back. The American jurist came into court one day with unkempt hair and beard, the same dirty-gray suit, but arrayed in a pair of brand-new, yellow-kid gloves of the most flaming hue, through which the hands seemed to have sprawled. When seated on the bench he held up his hands with fingers outstretched, and a broad grin on his face, and the audience so roared with laughter that no business could be transacted. The mockery was so palpable and so successful, too, that the Englishman vowed he would have nothing more to do with such a boor, and resigned. So thereafter the cases were tried before the rude and fun-loving American justice alone. Such are the stories told by the Steilacoomers, who think their town had no small share in the capture of San Juan, and the settlement of the boundary-line.

Taking the train four miles from this little village, we now proceed to Tacoma, the northern terminus of the road, the route lying through the same magnificent forests that are found in the whole region lying west of the Cascade Range, an area embracing thirty thousand square miles. This embryo city is already a great lumbering-mart, and is destined to be a place of notable importance. The houses of Tacoma have no more order than if they had been dropped in a shower of rain, but the place has an air of energy and thrift that augurs well for its future, which is prophesied by the miles of logs scattered along the beach, the endless piles of sawed lumber, and the number of ships in the harbor. The principal trees contributing to the lumber business are the red and yellow fir. These forest giants are only surpassed in size by the California red-wood trees, of which we have heard so much. Some of them grow four hundred feet high and fifteen feet through, single trees yielding eighty thousand feet of sawed lumber. Out of the yellow fir are made the huge ship spars and masts which the Territory exports to all parts of the world. Such are its qualities that the European governments have agents continually there to buy the quantity they may desire. There are thirty lumber-mills along the sound, which cut about four million feet a year; and it is believed that this region alone is able to supply the whole world with

timber for years to come, and that it is likely to become some day the great lumber-exporting and ship-building mart of the world.

From Tacoma all northern travel is by water, as railroads are very sparse in the Territory. Little puffing steamboats stir up the waters of Puget Sound, and their long pillars of smoke rising in the air may be seen floating over the picturesque expanse of



Scenery of Puget Sound.

water. Taking one of these little steamers, which if small are fast, we have a most delightful water-journey to Seattle, some thirty miles to the north. The scenery is made more interesting by the frequent sight of fishing hamlets, and fleets of Indian canoes bound for the fishing-grounds. The charm of the splendid inland sea of Puget Sound lies as much in its magnitude and the calm grandeur of its surroundings as in merely brilliant effects. On a fine day there are three strongly marked colors in the view—the white of the snow-peaks, the deep somber green of the fir-forests, and the blue of the sky and water. When the rose-tints of the setting sun flush the scene, the tints of water and sky, of mountain-peak and woodland, are so soft, varied, and delicate, that they can only be compared to the changes of the kaleidoscope. Exquisite contrasts of color, greatness of spaces, and sublimity of mountain outline, may be said to be peculiarly characteristic of Puget Sound.

At Seattle we find a most interesting body of water in Lake Washington, as also the largest of the territorial lakes. It is twenty-five miles long, and from three to five miles in width, and, as an example of lakes buried in wooded regions, is one of the

finest in the United States. Heavy forests extending in unbroken ridges up the mountain-sides surround it, and high up above all looms Mount Rainier, a snow-peak fourteen thousand feet high. At one time it was believed that the Federal Government would locate a naval station for ship-building here, as the lake could easily be connected with the sound by a canal which would only need to be a mile long. The banks yield coal, iron, and lumber in rich profusion, and the water is deep enough to float the heaviest ships. It is by no means improbable that the great navy-yard of the country may yet be located here, for every natural advantage appears to exist for such a selection.

The city of Seattle has about three thousand population, and does a great business as compared with its size. It has a university (so called), and excellent common schools, and the people are immensely proud of its superiority as the territorial seat of learning. Formerly it was called New York, but a fit of generosity, mingled with a spasm of common-sense, caused a change of name to that which it now bears in honor of Seatl-h, chief of the Duwamish tribe of Indians, who proved himself the steadfast friend of the whites during the dark days of 1855–'56, when they could not move out of the town without risking their lives. It was he who sent word to his pale-faced brethren that they would be attacked by a large body of warriors on a certain day; and this timely information prevented not only a massacre, but was the means of driving the warlike savages out of that section of country; for, when they attacked the settlement, they were received so warmly by the little garrison, and shelled so vigorously by the sloop-of-war Decatur, that they never again attempted the capture of any village along the sound. The old chief, who possessed a face unusually kind and expressive for one of his race, lived to a ripe old age, revered by all who knew him. From Seattle one may make an excursion to the Cascade Range, only a few miles away. We find the richest alluvial lands, pretty mountain-valleys, hidden amid rocky pinnacles, and foaming streams that burst from their beds of snow to steal down as purling brooks through the meadows below. Such a delightful primitive country, where one is alone with Nature in the most cheerful and picturesque woods, would almost reconcile the mind to the free barbaric life of the red-man. Another pleasant excursion is a visit to Snoqualmie Falls, called by some genius of a poetical turn the Niagara of the Northwest. The cataract is two hundred and seventy feet high, and, when the river is strong, has a width of eighty feet. Hemmed in by dense woods, enveloped at the base by huge crags of basalt dark as the shadows of night, and fed by a swift river, it possesses many of the elements of the best scenes produced by falling water. The cataract is far more than picturesque in the gloom and fury with which it pours over the precipice. The falls are carefully avoided by the Indians, who believe that the roar of the water is the wailing of the dead lamenting their sins, and that any intrusion on this magic ground would be punished by death. One of the legends of the falls is that a large band of warriors from the mountains, at war with a coast tribe, attempted to surprise a party of the latter encamped at the foot of the cataract. Unacquainted with the

river, their war-canoes were hurled over the brink, and they were dashed to pieces on the rocks below. Their death-shout, mingling with the roar of the waters, was the first intimation which the sleeping camp below had of the nearness of their foes. After the first fear was over, the suddenly aroused braves lighted fires, and went searching for their enemies, scalping all they found, and mutilating the remains in such a manner that any tribe who might discover them would be certain to know



Snoqualmie Falls.

that it was the bravery of the Snoqualmie warriors that had sent so many foes to the spirit-land. Having completed their work, the proud band set out for their own village, and entered it with shouts and songs of joy, the envy of every man and the pride of every woman who had not been present at the successful catastrophe. The young chief who had controlled the party was admired so much for his good fortune that he was appointed to the supreme command of the village, and from that day

forth success attended the standard of the tribe. The fame of its warriors had become so great that they were deemed invincible, and few foes dared to measure spears with them. The descendants of these invincibles must have deteriorated sadly of late; for to-day they are as poor and plebeian a throng as ever wore moccasins, and the last in the world to be taken for the descendants of high-spirited sires.

Among the animals found in this part of Washington Territory is one of curious traits and ungainly form, which, so far as is known, is not found in other parts of the world. It has some of the habits of the ground-squirrel, but it also resembles the beaver in the manner in which it cuts roots and shrubs to get its food. The *showtl*, as it is called, is only about thirteen inches long, and from five to seven inches high, and lives for the most part in deep burrows. The claws are strong and sharp, with great power as mining implements; so, when pursued, the *showtl* tries to dig a burrow to hide itself. It appears to be the only example of its kind known with the exception of an animal a little like it in Australia, and to have the sole use in the scheme of life to be the connecting link between the squirrel and the beaver, to both of which it has some likeness of form and habit. The Indians have a tradition that this little animal was the first creature endowed with life, and the source whence sprang their own race. Nevertheless, they think its flesh a delicious morsel, just as the African negroes, who revere the gorilla as their progenitor, also love to feast on the meat of the huge ape.

Taking passage again on board of a steamer, we proceed among the islands of the Washington Archipelago, and pass several thriving hamlets on the shores. The route to the north reveals the same limitless sea of foliage and towering snow-peaks—whose solitude apparently has never been broken by the foot of man—which we have noticed before. But soon the heavy smoke loitering over the tops shows that we are approaching the celebrated lumbering towns for which Puget Sound is famous. These towns are occupied only by the hands engaged in the mills, outsiders being tabooed for fear that they might engage in business transactions which would injure the trade of the companies owning the factories and town sites. The most important of these lumber-marts is Port Gamble, which boasts that it has the largest saw-mill in the world, its capacity being one hundred thousand feet a day! This is situated on Hood's Canal, a branch of the sound noted for its pretty harbors and charming scenery. Its bluffs are so bold that a ship could be ranged alongside and fastened to a tree on shore without incurring any danger of running aground. The same thing may be said of the whole of Puget Sound, and it is this fact that makes it the finest and safest harbor in the world.

A large island in Puget Sound, called Whidby, which attracts attention from its bold promontories, is remarkable for the peculiarity of its deer, nearly every one being handsomely mottled, while some are pure white, an effect resulting from features of soil and climate. The Indians in the northwestern portion of Washington Territory have for many years been peaceable, and have good schools, conducted by Catholic missionaries, both priests and nuns. Their good works are manifest in the superior

character of the Indians of this portion of the Northwest. The pupils of the school are not only taught the simpler forms of book-lore, but are carefully educated in farming, gardening, and several of the trades, such as carpentering and blacksmithing, while the Indian girls are instructed in cooking, dress-making, and similar household arts.

In these random descriptions of the more settled and easily reached portions of Washington Territory, but little has been said of its wonderful interior, which is equally interesting for its beauty of scenery, the richness of its valleys and savannas, the profusion and variety of its game, and the great forests which offer an almost inexhaustible field for the lumberman. It will probably be many years before Washington Territory is much more settled than it is now, owing to the large extent of desirable lands so much easier of access. For many years it will be rather known as a paradise for the sportsman and a delightful resort for the invalid, than as a great field for industry. But the time will surely come, so say those best acquainted with



Saw-Mill, Port Gamble.

the resources of this remoter portion of the United States, when its almost boundless advantages will make it one of the most prosperous and favored corners of the land.

One of the most striking features of scenery in the far Northwest consists in the character of its cataracts and cascades. These are formed by rivers that take their rise in great mountain-peaks. They are marked by their mighty leaps, the

roughness of their surroundings, and their strange outlines. But these rugged features are often softened by the rich greenery that envelops them. The entire region beyond the Rocky Mountains is of volcanic origin, and the rivers are narrow, deep, and rapid, for it requires both volume and swiftness to cut through the rocks of adamant which obstruct their courses. Thus these cascades possess features peculiar to themselves. For example, numerous rocky islets check the flow of the water before making its final bound, and thus produce a series of boiling eddies and small leaps which add much to the striking effect of the main fall. Another feature is the suddenness with which the final leap is made, and the brilliancy of the rainbows which flash and die so swiftly. The falls are generally convex in form, owing to the velocity of the rush. The vigorous motion gives them a pictorial effect very striking. The cascades that pass through forests are usually narrow and small in volume; but they have the greatest altitude, and such force that they hiss fiercely as they bound from their shallow bed to fall over the precipice in a tissue of snowy foam. Those that flow through open or treeless spaces are broad, massive, and deep. The former brawl while the latter roar; one expresses the picturesque, the other has a wild, rude grandeur.



Rogue River Falls.

Beginning with the region bordering on the Pacific Ocean, north of California, we find the first important falls in Southern Oregon, known as the Rogue River Falls. They are formed by the Rogue River, not far from where it breaks through the Coast Range on its way to the sea. This stream throughout its entire course is surrounded by magnificent firs, pines, and cedars, which give it the appearance of an undulating, silvery thread, stretched through a mass of foliage. Where it takes its abrupt leap the forest is so dense as to be almost impassable in summer, owing to the luxuriance of the shrubbery and undergrowth, and so dark and cool even in the warmest weather that one feels cold in a short time, as the place exhales a palpable

humidity. This only adds to the weird charm of the falls; for solitude and foliage but render such scenes the more interesting.

Looking upward from their base, they are seen to emerge from a very narrow opening between two huge masses of dark crags; but, ere they reach the ground, they seem to be divided into three sections of foamy spray, owing to the interruption of the line of sight by the dense and tangled foliage. The best and the only satisfactory view of them that can be obtained is about ten yards on either side of the front, as the woods are there more open. Their actual height is estimated at two hundred feet (and it certainly seems all that from beneath), and their width at ten yards. Their volume of water in summer is not very great, but during the spring freshets they have a depth at the summit of ten feet. They are then in their finest condition, and the stream possesses such powerful velocity that it whirls heavy crags along its course as if they were mere pebbles. One of the most interesting features about the falls is the luxuriance of the mosses and lichens that grow wherever the spray is showered. Their base is surrounded by cedars, junipers, alders, and willows, which are covered with mosses to such an extent that the trunks and branches are almost concealed. This, of course, prevents much leafage, so that they present the appearance of a forest of gigantic mosses.

Desiring to avoid the spray, we tear away some of the mossy covering from a tree, and find between it and the trunk a capacious chamber, large enough to hold ten persons, and thoroughly water-proof. In this snug retreat we have a fine opportunity of studying the delightful scene before us. The water in its fall throws copious showers upon the firs, and these produce a permanent rainbow in the forest, which extends from the highest tree in the vicinity to the lowest shrubbery. This is a charming effect, and most pleasing it seems, as the line of foliage through which it passes is brilliantly illumined with all the prismatic hues.

Passing through the beautiful Rogue River Valley, which seems like a large copy of the vale of Chamouni, and the romantic glens of the Umpqua, which stand alone in their uniqueness outside of Norway, we find ourselves during the course of the second day at Oregon City, perched on a bank of the Willamette River where it leaps into a chasm thirty-six feet beneath. The falls are really a series of cascades for five hundred yards, and, where they sweep downward instead of moving in a solid body of water, they break into several falls, which vary in outline according to the form of rocks through which they force a passage. Extending from one bank of the river to the other, a distance of about a quarter of a mile, they offer a grand view in early spring as they bear onward an immense mass of water produced by the melting snows of the mountains, and this, through the swiftness of the current, is hurled into the chasm with such tremendous force that the spray is sent sailing upward to a height of many feet. The general form is concave, or like the inner side of a horseshoe, two ranges of basaltic crags forming the extreme bounds of the curve. In summer rocky islets peer above the water at the place where it makes its leap; but in freshet-time each one is covered with a mass of boiling foam. So swift is the current that

it has gradually swept away large islands once in the river, and is cutting away the shores slowly but surely.

These falls can be approached either by boat or rail, as they are only fifteen miles from Portland, the capital of Oregon. The pleasantest route is by river, as charming rural scenes greet the eye at every turn, and the first view of the falls from above makes them seem higher and whiter than they really are, owing to the contrast offered by the towering green firs surrounding them on every side. Steamers plying on the river pass around through a canal, and in the half-hour of the passage we have ample time to appreciate the beauties of the falls and to get dizzy with the boisterous, whirling motion. For the disciple of old Izaak Walton, there is an excellent chance



Falls of the Willamette.

to make war on the finny tribes in the Willamette River during April and May, for then the water is so thronged with salmon that they almost crowd each other ashore. Thousands of fish are destroyed by launching themselves in the air in their attempts to scale the falls.

A few miles from Astoria, the oldest American town west of the Rocky Mountains, we find Young's Falls. We must sail down the Columbia River about a hundred and ten miles to reach this point, leaving the steamer at Astoria, and taking thence one of the pretty little yachts which always stand ready for the tourist's use. For a short distance we must go on foot, too, as Young's River becomes too shallow for navi-

gation. After a foot-journey through the matted underbrush of rose and berry bushes, armed with myriad thorns, which is slow and tedious, we suddenly emerge on this charming water-fall, bounding suddenly from its dense undergrowth of bushes and flowers and tumbling down into a dark pool in a white apron. It is exactly in the shape of a child's pinafore, and is formed of two leaps, the first ten and the next seventy feet.

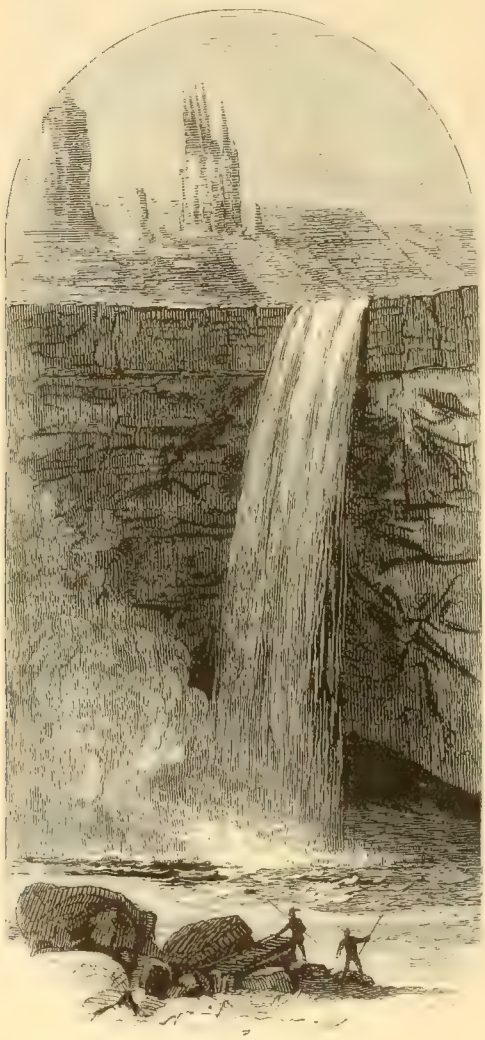


Southern Side of Willamette Falls.

These falls are rendered unusually interesting by the number of birds that frequent their vicinity, the profusion of flora, and the great height of the firs that environ them. Many of these firs are three hundred feet high, and from ten to fifteen feet in diameter—regular forest-giants, which are not excelled by any trees in the world except the *Sequoias* of California. The first white visitors to these falls were Lewis and Clarke, who encamped in their vicinity in 1806, after completing a survey of the Columbia River from its source to its mouth. They are now frequented mostly by the Chinook Indians, who pitch their tents near them in the berry-season to gather a store of fruit for the winter. The profusion of these berries is something marvelous, embracing many varieties unknown in the Atlantic States.

Returning up the Columbia River as far as Portland, let us take the steamer that runs to the Cascades of the Columbia, some sixty miles distant. The trip up this noble stream is one of the most interesting that can be made. Heavy forests of firs, which extend to the horizon on every side, greet the eyes, and are reflected in gigantic spiral wreaths of foliage in the crystalline water, while far in the distance loom several snowy peaks, with fleecy clouds hovering about their crests. These, and the

nearer, rocky, fir-clad mountains, are also reflected with so much fidelity that you seem to be passing over them. Even the sky is so accurately pictured that one at first view instinctively withdraws from the railing of the steamer, as if he feared that he would fall *down* into the unfathomable depths of the clouds. Several small mountains of lonely and oddly shaped crags, and half a dozen water-falls, add much to the beauty of the scenery, so that the attention is steadily riveted but never wearied by the glowing pictures that unfold themselves in rapid succession. The most striking and important of the latter are Multonomah Falls, which plunge downward a distance of seven hundred feet in a ribbon of white; but long ere the waters reach their craggy bed, or the heavy forests far beneath, they are dissolved into snowy drops of spray, which are whirled in every direction by the lightest zephyrs. After uniting below, they plow their way in a tortuous course through moss-lined banks and tangled gorse until they make their final leap into the Columbia in a broad and thin sheet of silvery water. There is something exceedingly lovely about this miniature Niagara, as it seems like an enchanted scene, owing to the vivid emerald hue of the luxuriant grass, and the density of the coppices of young firs and cedars which grow in wayward wildness about the base of the first fall. These make one of the most charming dells imaginable; one so fairy-like in character, that a person would naturally select it as the abode of those weird and pleasant nymphs of the forest, the dryads and hamadryads; for what more could they require than a lovely spot which is never disturbed by anything save the notes of the wood-thrush and yellow-bird, or the purling cadence of the falling water, while around, on all sides, are scenes that represent every variety of landscape beauty? The popular local name for this cascade is Horsetail Falls, owing to the supposed resemblance which the two leaps bear to the equine appendage.



Pidouse Falls.

Continuing our way up the Columbia River, a trip of forty miles by boat and

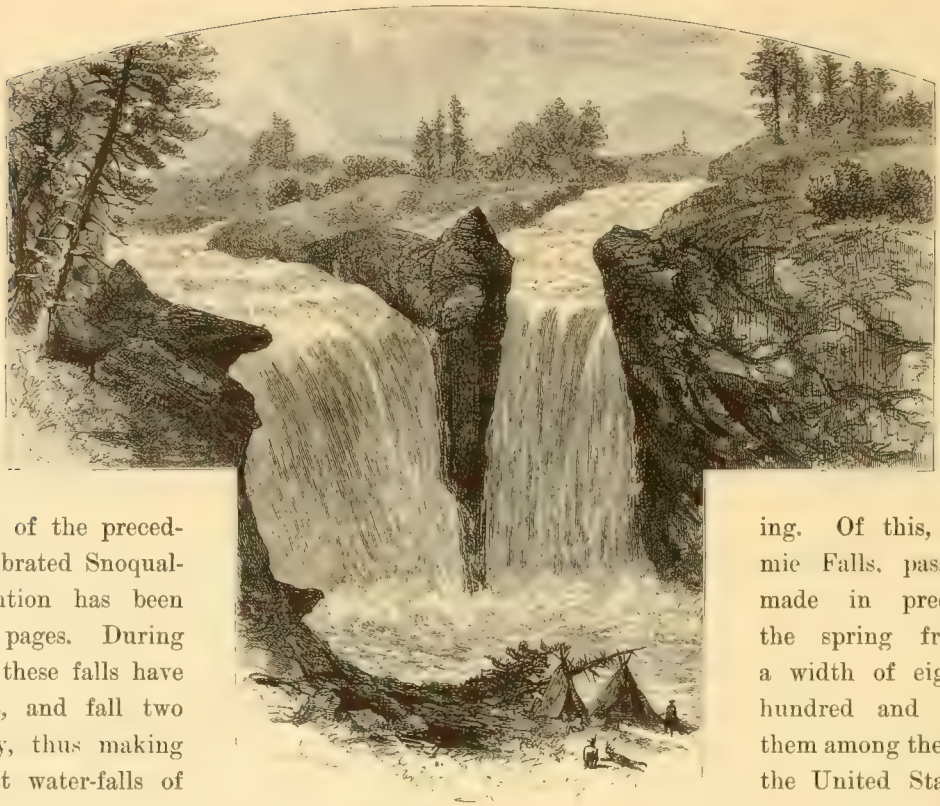
rail lands us at the mouth of White River, a mountain-stream emptying into the Columbia. Securing a guide and horses, a ride of a few hours brings our little cavalcade to the end of the journey. At first it seems like a waste of time and energy to have come here, for nothing is to be seen but a deep and gloomy precipice, from which comes a brawling sound. By dismounting and crawling down the steep sides of the great gorge, we suddenly find ourselves face to face with the White River Falls. These are formed by three leaps; the upper one about fifty, the second thirty, and the third sixty feet. During the dry season the upper falls dwindle into broad ribbons, which unite below and dash into a round basin cut in the rocks; thence they bound into a cool, dark pool some sixty feet beneath, whence the water pours out into a rock-encumbered channel which lashes it into boiling fret and fume.

The cañon through which the river dashes has sometimes a depth of a thousand feet, and, being quite narrow, produces such effects of sound that the brawling water at the base is raised into a sharp and steady roar at the summit. The only vegetation visible near the falls consists of a few scrubby willows, that obtain a meager subsistence on the loose, arid soil a few yards beyond them. As there is nothing to soften the features of the black, rugged crags that environ them, their pictorial effect is not so great as it otherwise would be.

Continuing up the Columbia, we find a series of cascades, water-falls, and rapids, but none specially worthy of notice till we reach the Palouse and Spokane Falls. The former are unique, on account of the strange character of the rocks which surround them, assuming as they do the outlines of chimneys, columns of all shapes, broken pinnacles, and sharp needles, while the banks are ranged in the form of terraces one above another to the height of nearly two thousand feet. These falls are caused by the Palouse River, nine miles from where it mingles with the Snake River, the largest tributary of the Columbia. This stream flows with great velocity through three cañons, but it is the passage through the second which forms the falls. The cañon is only thirty feet wide, and out of this the water pours with an angry hiss and plunges down one hundred and twenty-five feet. Salmon ascend as far as these falls, and this causes the spot to be chosen by the Palouse Indians as a fishing-ground. Their numerous canoes add much to the pictorial charm of the scene, while the half-naked red-men with lances poised, or bringing from the water the struggling salmon, give it a most animated appearance.

The falls of the Spokane consist of two leaps, the first of twelve feet, the second of a hundred. They seethe, roar, and boil for some distance before making their big plunge, and continue the turmoil for quite a way after reaching the chasm which receives them. This cascade is also very picturesque, and surrounded by rock-terraces rising many hundred feet above them. The Spokane fall completes the most important series of cascades along the Columbia and its feeders, though there are several more which surpass the falls of Minnehaha in height and width, though not in beauty of surroundings.

It is in West Washington Territory that we find a noble cataract far surpassing



Spokane Falls.

any of the preceding. Of this, the celebrated Snoqualmie Falls, passing mention has been made in preceding pages. During the spring freshets these falls have a width of eighty feet, and fall two hundred and seventy, thus making them among the noblest water-falls of the United States. These are reached by a fifty miles' canoeing trip up the Snoqualmie River, which has its outlet in Puget Sound, the journey taking three days. Mr. Murphy, a traveler, who wrote an account of this fine cataract in an article contributed to "Appletons' Journal," gives a graphic description of his visit:

"By noon of the third day we came to a series of boisterous, foaming eddies, that extended over a distance of seven miles, and to pass these we had to ply pole and paddles with the utmost vigor. By making herculean efforts, we managed to crawl over them in eight hours; but, once past, we had tranquil waters until we came within hearing of the deep roar of the falls, which were now two miles distant. The large space over which they can be heard is due to the acoustic properties of the surrounding woods, and the echoes of the low, rocky hills beyond them. The resonance of these forests is something marvelous, and on first acquaintance rather startling, as an ordinary tone of conversation is heard several yards away, a laugh rings in vibratory undulations for a distance of at least an eighth of a mile, while the scream of the wild-cat is audible a mile off. It is this echoing characteristic of trees that causes the falls flowing through wooded regions to be heard over such a large area as they are; so we find that the Snoqualmie Falls, with only a tithe of the volume of Niagara, are heard many times the distance the latter are.

"Having found all further progress by water checked by masses of trap-rock which

were hurled together in the wildest confusion, we pushed our canoe ashore and made a comfortable encampment of boughs for ourselves under the umbrageous shelter of a spreading spruce that must have seen several centuries of life. Having prepared supper, and partaken of it with the keen relish peculiar to those who have labored hard, my guides led me through a forest so dense that it only permitted a few straggling rays of the moon to pierce its inky blackness in a few places. Our passage through it proved to be an exceedingly difficult one, as the shrubbery, matted as usual, tripped us quite frequently, and sent us sprawling on all-fours into apparently unfathomable masses of briers, while the tall and elastic undergrowth lashed our faces with incisive vigor. It took us two hours to reach the falls, as we were compelled to make many windings, and our only guide was their vibratory thundering. When I reached them, however, my fatigue disappeared immediately, for my surprise was as great as it was pleasing. I had expected much, but such a towering height, such rude grandeur, such a volume of water, and such weird beauty, I was not prepared to encounter in this wild retreat. The scene was actually sublime and bewildering in its variety. The water poured out of a deep cañon in a convex body of seething foam, and fell on the black, shattered crags below in a yellowish-white mass of glinting globules. After gazing at the magnificent picture, with its strong effects of light and shade, for half an hour, I returned to camp, and, throwing myself on the ground beside the bright fire, listened in silence for some time to the rumbling music that rolled toward me in heavy volumes. Being struck by the wildness of the picture, I asked my swarthy guides to move some distance into the woods, and chant the death-song of their tribe, that I might make a comparison of melodies characterized by simplicity and primitiveness, and the opposite of each other in color and expression. They promptly complied with my request, and in a few moments from out the plutonian depths of the forest issued their low, wailing song of sorrow. As this mingled with the ponderous monotone of the falls, the effect was intensely striking. After singing for half an hour in a deep, Gregorian tone, which harmonized well with the scene and the wild and massive melody of Nature, they returned to camp, and a few minutes later were rolled in their blankets and deep in the land of Somnus. I was so impressed with my surroundings that it was far past midnight ere I fell into a restless slumber, and then only to dream of strange and impossible water-falls and stranger music.

"We were astir before dawn the next morning, and, after breakfast, again visited the scene of the previous evening. I found that it seemed, if possible, more interesting, as every feature was clearly prominent; yet the misty haze of the night, which threw some portions into shadow, and thus rendered them more weird in appearance, was missed."

The grandest exhibition of Nature in the Northwest, in the way of water-falls, is found in the Shoshone Falls of Idaho, for their volume, the highest on the continent. Though inferior to Niagara in massiveness, they excel it in altitude some seventy feet, two hundred and thirty feet being the estimated height. The falls can be

reached from the east, over the Central Pacific Railway; from the west, by stage-ride from Portland, Oregon, which takes six days. Some might consider it a waste of time and energy to visit this grand spot, for it involves much fatigue and trouble; but, once attained, it repays any effort, for we may congratulate ourselves that, having seen it and Niagara, we have feasted on all the forms of wonderful beauty and sublimity which cataracts can present.

Approaching by the western route, we quit the stage at Rock Creek Station, composed of one log-cabin, where the passengers dine and the horses are changed. Through the kindness of the agent of the stage company, we are here furnished with mustang ponies, on which we are to ride to the cañon of the Snake or Shoshone River, where, at Springtown, a small and squalid mining hamlet, we secure a guide to the famous falls.

After a ride of three miles our guide promises to show us what he calls the prettiest falls in the world, a place entirely unknown and unvisited. We strike an Indian trail, which winds down bluff after bluff, till it reaches what is called the Park, on the bank of the river. Opposite this, in the middle of the stream, is a small island, covered with scrubby underbrush, and on both sides of it the river hurls itself over a precipice about a hundred and ten feet high. By carefully crawling over a shelf of loose stones and lying on the stomach, we are enabled to get a fine view of these picturesque falls. On the farther side the water flows in a broad white sheet; on the near side it is confined within a convex mass—both of them spanned with splendid rainbows.

This only sharpens our desire to see the Grand Falls, whose hoarse thunder can be heard far away reverberating in the deep cañons. Having reached the upper plateau again, a two miles' hard gallop brings us very near the object of our ride, for the back of a mustang pony, when going at speed, in an instrument of torture than which the Inquisition had nothing more dreadful.

Looking down from our elevated terrace we can get a glimpse of the outline of the falls, and around them all the elements of a beautiful landscape—an undulating park decked with beautiful flowers and rich green grass, a placid river, and towering terraces of bright-colored crags. Dismounting, and leading our horses down the bluffs, we reach the lovely little park skirting the river, where the grass stands knee-deep, and gaudy flowers are spread like a carpet.

Lookout Point juts over the bank directly where the river plunges downward only four feet below our standing-ground. Glancing up the stream, we see its course for half a mile, a mass of hissing rapids and small cataracts, dotted with bold crags rising out of the bed of the stream, and with small islets all a-bloom with flowers. There are eight falls in a distance of two hundred yards, which are from six to twenty feet in height, all different in outline. Close to the shore the water makes deep canals of bubbling cascades through the rocks, and their gentleness contrasts with the turbulence which adjoins them. As these diverging bodies of water approach the precipice, they swing together to make the Grand Falls, which are only excelled by the falls of

the Missouri and Niagara in volume, while they are superior in height, in diversity of form, and in beauty of surroundings. Massive in power, and vigorous in action; warm in color, yet environed by gloom; picturesque in immediate background, yet surrounded by savage grandeur—they possess all the elements that make such scenes attractive to the lover of the beautiful. Their very situation in the midst of a desolate plain, and hemmed in by cañons whose dreary depths are unvisited by the sunlight for many months in the year, adds to their interest and enhances their splendor. They have a width of three hundred yards by following the curve of their outline, but in a



Shoshone Falls, Snake River.

straight line they will not much exceed two hundred. They are of an irregular concave shape, somewhat like a reversed crescent; but during the spring freshets they assume a convex form, owing to the increased volume and swiftness of the water. The pretty park, with its luxuriant grasses, flowers, and coppices of junipers, gives a softness and color to the falls that are delightful to the eye, as they impart the picturesque element so much needed; but on the opposite side the dark and lofty terraces of trap loom up against the sky in black masses, and convey the most striking idea of gloom and wildness. It is from the base, however, that one appreciates the grandeur of a cataract best, and by a somewhat perilous scramble down the steep

crags we finally work our way to the bottom. Every step must be watched, for a slight mischance will plunge us into the boiling caldron below. At last, by clambering over rough bowlders, springing over fallen trees, making bridges of slippery trunks covered with wet moss, stumbling through dense underbrush, we get within forty feet of the cataract, where further advance would be death. Here the overpowering scene fills the heart and mind with its grandeur. The water, in sweeping waves of white and with a sound like that of a thousand great mills in motion, thunders steadily downward, and splendid rainbows span the falls and river; while showers of vapory spray rise languidly to a height of three hundred feet, then lazily float away in dark clouds.



Island Falls, Snake River.

The Snake River boasts of several other smaller cataracts, the most important being the American Falls, some thirty feet high; but a few of its tributaries display the most unusual varieties to be found, perhaps, in the world. Some of these plunge down into the earth a distance of two hundred feet through irregular, rocky caves, and, continuing their way under-ground for several miles, come again to the surface in the form of a boisterous river only to renew the leap. The most important of these are Lost Falls, some thirty or forty miles from Shoshone Falls.

To reach the next great falls we must betake ourselves to the Yellowstone Park in Montana, whose combined wonders make it perhaps unequaled in the world, and which will hereafter be made the theme of a separate article.

From this region to find any other leaping water of importance we must make a long journey to the Sioux River, which divides Iowa and Dakota. Opposite Sioux City the river dashes over a ledge of bowlders in several streams and falls a hundred feet into a rock-bound cavity filled with foaming whirlpools that seethe and struggle to escape from their prison. These picturesque falls have also interesting surroundings of rocks shaped in very curious forms. In the time of the spring freshets these

falls are very striking, though far less grand than some which have been recently noticed. They are always spanned with rainbows, and the crags through which they pour have been carved into the most unique forms, while in the background are other queer and suggestive rock-shapes. These fantastic images and a pleasant landscape add no little to the attractive *ensemble* of the cascade.

The last but not the least of the water-falls of the Northwest worthy of description are those of the Missouri, about five hundred and fifty miles from its source. These falls are in reality a series of cascades, as their declivity in a distance of little over sixteen miles is three hundred and fifty feet. This extent of river is one mass of fierce rapids, which boil and roar with the greatest fury at all seasons of the year. There are four cataracts in the distance, the first twenty-six, the second forty-seven, the third nineteen, and the last eighty feet in height. The latter, known as the Great Falls, as they extend the full width of the river, receive the waters of all the tributaries of the river to the north. They are next to Niagara in volume, and surpass it during the spring freshets. They are then grand, even terrible. They resemble a fierce and mighty sea let loose rather than a shallow river, and even solid crags can not stand their force. They have a savage grandeur that inspires awe; and this effect is heightened by the steep bluffs that surround them. They have none of the qualities of a charming picture; all is fierce action and untamable wildness. They possess majesty, power, and strength, that convey the most complete idea of the might of force, but they lack variety of outline and pleasing surroundings to lighten the dreary landscape that environs them. They display a harshness that becomes dull after a short time, for their impetuous action and dazzling hue can hardly make amends for the flatness, tameness, and want of color, of their immediate background. Were they fringed by a forest, or even a coppice or dell, their pictorial effect would be increased immensely.



The Yellowstone River.

THE YELLOWSTONE VALLEY.

A wonderland of the West—Interesting traditions and adventures. The journey into the valley—Mammoth Hot Springs and Mud Springs—The Mud-Volcano—The Falls and Grand Cañon—Wonders of the Fire-Hole River—The Lower Geyser Basin—The great attraction of the Yellowstone Park—The geysers of the Upper Basin—The Giant and Giantess—Theory of geyser eruptions—The Yellowstone Lake.

THE wonderland of Nature, of which our country presents so many grand examples, offers nowhere greater attractions than in the valley of the Yellowstone River. This has already become a Mecca to which the lovers of science, adventure, and travel have begun to throng in large numbers, and to which in future years pleasure-seekers will more and more tend as the means of approach become more easy. Time was, not long ago, when the marvels and beauties of the Yellowstone could only be seen at the danger of one's scalp, for the country was scoured in every direction by hostile Indians on the outlook for spoil and murder. This peril has now practically ceased, but the journey continues to be surrounded by considerable hardship. While this adds no little flavor to the trip for those who enjoy a rough and adventurous life, the majority of tourists, whose imaginations may have been stirred by stories of this interesting region, will probably wait till the advent of a railway before they gratify their curiosity.

The Yellowstone River, which has a long, winding pathway of thirteen hundred miles before it loses its waters in the bosom of the Missouri, has its source in a noble lake situated in Wyoming Territory among the snowy peaks of the highest mountains of the country. The upper track of the river is through magnificent cañons and gorges, and many striking water-falls and rapids diversify its flow. The scenery presented at various points of its course may be justly called very remarkable, and worthy



Map of the Yellowstone National Park.

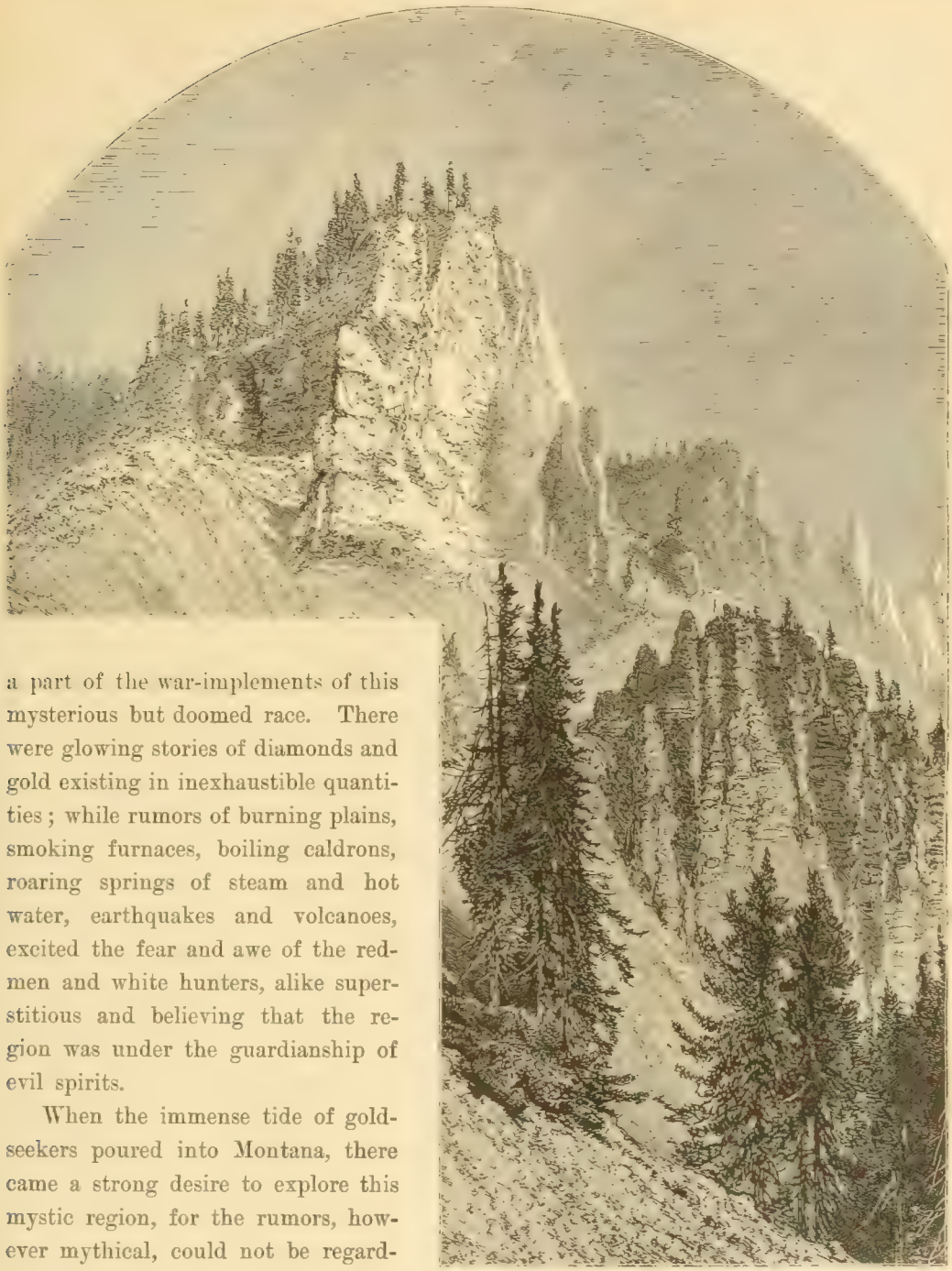
to be compared with any found in the country. The entire region about the source is volcanic, abounding in boiling springs, mud-volcanoes, soda-springs, sulphur-mountains, and geysers, the wonders of which surpass those of Iceland.

This curious region, which has been set apart by Congress as a National Park, possesses, indeed, striking characteristics for the uses to which it has been devoted. It exhibits the grand and magnificent in its snow-clad mountains and dark cañons, the picturesque in its fine water-falls and strangely formed rocks, the beautiful in the charming woodland shores of its noble lakes, and the marvelous in its geysers, hot springs, and sulphur-mountains. It is not an exaggeration, perhaps, to say that no other portion of the known globe unites so many surprising features, so many conditions of beauty and contrast to delight the artist, so many strange aspects to fascinate and instruct the student of science. We are told in one of the legends of the "Arabian Nights" of a miraculous valley concealed amid impassable mountains, where Nature had lavished her most splendid works, and monstrous animals roamed such as could be found nowhere else in the world. We may also fancy the Yellowstone Valley a similar home of giant animals of now unknown forms, for as a grave-yard of extinct races it presents the most striking aspects. When first discovered there were found thickly scattered over its surface piles of huge bones which belonged to those monsters that roamed the world in early geological periods; and these scientific treasures, though now gathered up from their more exposed tombs, still exist in great quantities, buried not far down in the earth. The whole region seems to have been once a highly favored haunt for walking wonders of beast-life, compared with which the elephant and rhinoceros are small and trivial.

Though these old and terrible inhabitants have long since ceased to be, except as curiosities in Nature's lumber-room, the strange region through which they tramped and sought their prey still remains in all its primitive wonder.

This grand domain, extending nearly sixty-five miles from north to south and fifty-five from east to west, is in the northwestern corner of Wyoming Territory, and extends a few miles across the border into Montana. Lewis and Clarke, the earliest Western explorers, seem to have known nothing of this region, save of the great lake, of which they had probably been informed by the Indians. The famous trapper, guide, and mountaineer, Jim Bridger, claimed to have visited this region, and from his rude descriptions grew the early stories about the supposed enchanted land.

Rumors circulated among the simple-minded mountaineers and early prospectors for gold, whose imaginations were credulous and active, of an El Dorado, like that marvelous land which stirred the fancies of the early Spanish conquerors. There were treasures and golden cities, trees of solid stone, splendid palaces and temples, lordly castles, and glittering spires. It was believed by many superstitious frontiersmen that all of the inhabitants had been punished for some mortal sin by being turned into stone, and that these grim sentinels might still be seen standing as perpetual reminders of supernatural vengeance. Strangely wrought and colored specimens, brought down from these enchanted regions by some adventurous explorer, were believed to be



Cliffs of the Yellowstone.

a part of the war-implements of this mysterious but doomed race. There were glowing stories of diamonds and gold existing in inexhaustible quantities; while rumors of burning plains, smoking furnaces, boiling caldrons, roaring springs of steam and hot water, earthquakes and volcanoes, excited the fear and awe of the red-men and white hunters, alike superstitious and believing that the region was under the guardianship of evil spirits.

When the immense tide of gold-seekers poured into Montana, there came a strong desire to explore this mystic region, for the rumors, however mythical, could not be regarded as altogether without some basis. An exploring party, under Captain Reynolds, of the United States Army, tried to enter the Yellowstone Basin in 1859, by way of the Wind River Mountains from the south, but failed on account of the

rugged route and the depth of the snow. In 1870 an exploring party under General Washburn, escorted by Lieutenant Doane, succeeded in entering the valley, and from this source came the first reliable accounts of the strange land. Then, in 1871, Professor Hayden, the United States Geologist, with a party under Lieutenant Barlow, of the United States Engineers, ascended the Yellowstone and traversed nearly the whole region now included in the park. It was discovered by these exploring parties that, wonderful as the Yellowstone region was, it was yet unfit for mining or agricultural purposes; so it was organized by Congress as a national pleasure-park.

The Yellowstone Lake lies near the southeasterly corner of the park, the river flowing from its upper boundary and running almost due north. The lake is twenty-two miles in length, and from ten to fifteen miles wide. It is seven thousand feet above the sea, and its basin is surrounded by mountains reaching a height of over ten thousand feet, the peaks of which are covered by perpetual snow. Along the shore of the lake and of the river are found numerous hot springs. About fifteen miles from its source in the lake the river takes two precipitous leaps known as the upper and lower falls, and beyond cuts its way through a great cañon, the walls of which are in some places fifteen hundred feet in vertical height. Near the western boundary of the park, the Madison, an important tributary of the Columbia, takes its rise, and along one of the branches of this river, known as Firehole River, are found extraordinary geysers, some of which throw volumes of boiling water two hundred feet high. In the southwestern corner of the park, the Gallatin, another tributary of the Columbia, has its beginning.

In our journey to visit the wonderful Yellowstone Park, let us enter from the pretty and enterprising town of Bozeman, which is in the southern part of Montana Territory on the borders of the reservation of the Crow Indians. The advance of civilization in this region was moistened by the blood of many of the early settlers and immigrants. Perhaps few portions of the far West have been more tragically marked by Indian massacres. The town of Bozeman was founded in 1863 by a brave adventurer of that name from the South, who led the first gold-hunting expedition to the Gallatin Valley and located the town between the east and west forks of the Gallatin River. He met his fate in the usual tragedy which ended the careers of so many of the early pioneers. A friend of his, who was obliged to go up the Yellowstone to Fort Smith on business, insisted on Bozeman accompanying him; for it was a dangerous route, and the presence of so bold an Indian fighter was a promise of greater safety. Bozeman at first refused, but was at last persuaded, and on departing he said to his friends that he should never return, as he appeared to have a presentiment of his fate. The two proceeded on their perilous journey in safety for about eighty miles, when one day, as they were eating their dinner, they saw a party of Indians approaching, whom they supposed to be friendly. They soon discovered their mistake, and Bozeman's companion fled, leaving the other to fight his way out alone. The gallant mountaineer, after making a desperate resistance, was overpowered and put to death with many tortures.

About two years before this, and at almost the very spot where the gallant Bozeman fell, a thrilling episode occurred, which shows the dangers of that early period, and illustrates the heroism so often brought out by these perils. In the spring of 1866 a party of twenty persons, including two women and five children, were descending the Yellowstone in a boat, on their way back to civilization. They were attacked by a large band of Sioux Indians, and, after several of the party were killed, the rest abandoned the boat with what they could carry and fled toward the settlements. They suffered everything on their route, pinchingly cold weather, heavy snow, and constant attacks from the Indians. Half clad, with but little to eat, they struggled on in their terrible journey till they were almost given over to despair. Eight wretched days and nights had passed, when several of the men proposed to abandon the women and children. Our brave mountaineer started up in fierce rage at this craven proposal, and swore that, though all the rest deserted the helpless ones of the party, he would die with them, saying that he never could tell his wife and children that he had left two poor women and their babes to perish in the wilderness. This gallant fellow shamed the others into courage, and was made the leader of the troupe. By his heroism and watchfulness he finally guided the party into safety. Such courageous generosity as this has been frequent in the annals of the border, and relieves the roughness and brutality of frontier life with noble deeds that shine like stars on a dark night.

The valley which stretches along the Yellowstone for many miles from the town of Bozeman is very fertile and beautiful. The climate is humid and mild, and the country is eminently calculated to attract the settler. The Yellowstone, above the mouth of Powder River, sweeps in long and majestic stretches, and the bosom of the river is studded with hundreds of islets, many of them so rich and verdant as to look like the lawn of a well-kept country-house. On the east side of the river is the reservation of the Crow nation, embracing an area of more than six million acres, abounding in rich mineral lands, pasture-grounds, and fertile valleys. Little parties of Indians may be seen nearly every mile of the route into the National Park, camped out for hunting or fishing purposes, their *tepées* forming quite a picturesque feature of the view as we ride along toward the wonderland which is before us. The Crows have been friendly to the whites since 1865—not, perhaps, because they love the pale-faces any too well, but because their mortal and hereditary foes, the Sioux and Arapahoes, have been intractably hostile to the white man. The Crows have furnished more daring guides and scouts to the United States Army than any other Indian people, and have always shown themselves trusty warriors in operating with their white allies.

About forty miles of horseback-riding, partly up the river-bank, partly through rugged, gloomy cañons, after leaving the Crow agency, which is nearly opposite Bozeman, brings us, weary and hungry, to the borders of the great National Park. After a night's rest at a humble ranch, where simple but hearty food is served by the owner of the cabin with unbounded hospitality, we again mount our horses and

press forward, and in a few hours reach the Mammoth Hot Springs, as they are generally known, though Professor Hayden gave them the title of the White Mountain Hot Springs. Before any report had been made on this region, and Congress had set it apart as a national park, two young adventurers from Bozeman, anticipating the value of the springs as a place of resort for pleasure-seekers and invalids, had taken possession of them. But any squatter-right of ownership thus obtained was, we be-



Mammoth Hot Springs.

lieve, abrogated by the action of the Government. We must be contented with the tent or bivouac during our stay in the Yellowstone Basin, for there are as yet no accommodations for the tourist, though the time will doubtless come when large and roomy caravansaries will offer their hospitable shelter and refreshment to the weary traveler.

Before describing the wonderful Hot Springs, a few words concerning the Yellow-

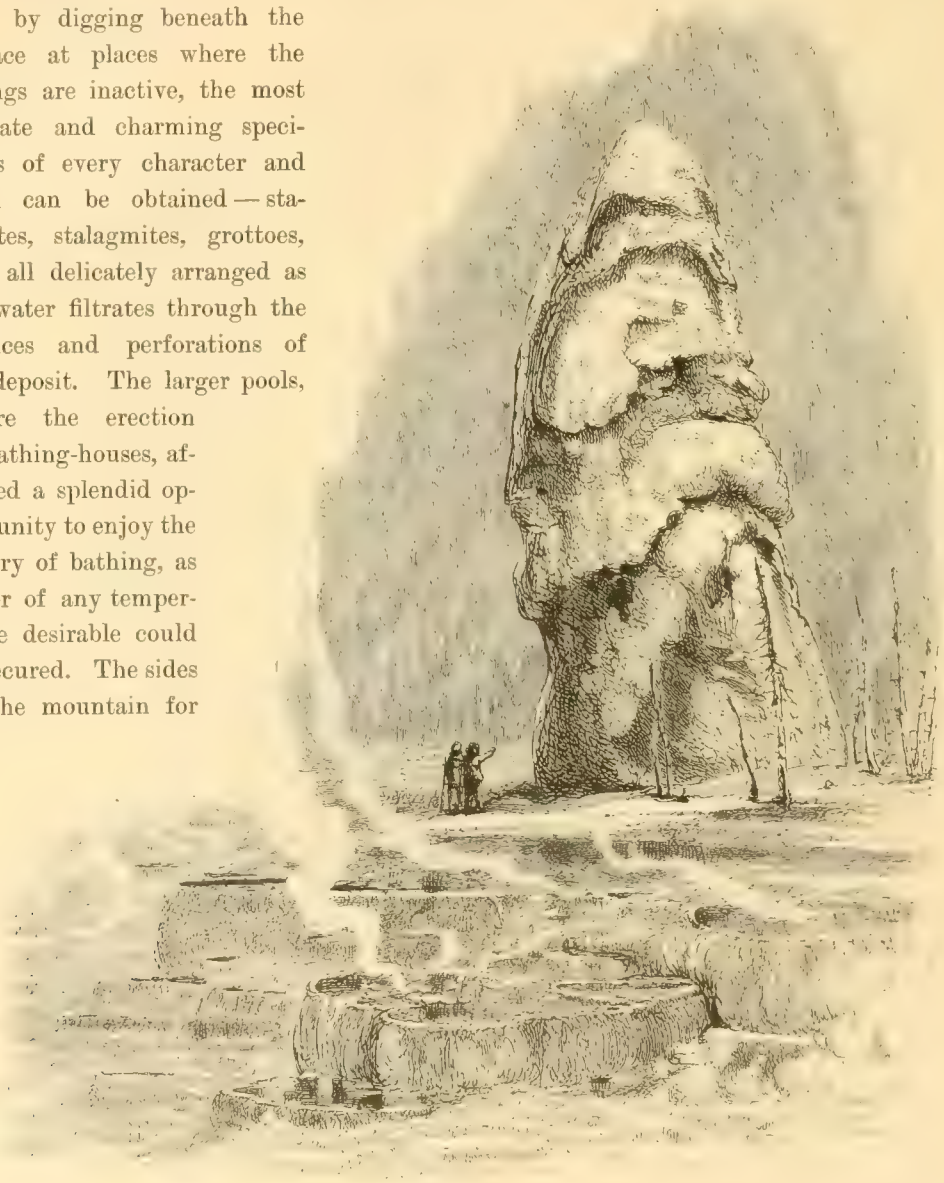
stone Basin will not be amiss. The basin proper, in which the greater number of interesting scenery and wonders, which give charm to this imperial pleasure-ground, occur, is inclosed within the remarkable ranges of mountains which give origin to the waters of the Yellowstone south of Mount Washburn and the Grand Cañon. The range of which Mount Washburn is a conspicuous peak seems to form the northern wall or river, extending nearly east and west across the Yellowstone, and it is through this portion of the range that the river has cut its way, forming the remarkable falls and still more remarkable cañon. The area of the basin is about forty miles in length. A bird's-eye view of the whole basin, with the mountains surrounding it on every side, without an apparent break, may be had from the summit of Mount Washburn. The entire basin may be regarded as the vast crater of an extinct volcano. In this great crater it is probable there were thousands of smaller vents, at the time when volcanic action was at its highest activity, out of which lava, fragments of rock, and volcanic dust were poured in enormous quantities. Hundreds of the cones of these dead vents still remain, some of them rising to a height of ten or eleven thousand feet above the sea-level. Mounts Doane, Langford, Stevenson, and more than a hundred other peaks, may be seen from any high point on either side of the basin, each of which was a center of volcanic action. The hot springs and geysers of the region are merely the closing stages of that wonderful period of volcanic activity which must have made this region once so terrible. Probably the time will come when these escape-valves will cease altogether to show any action. In the case of the Iceland geysers and hot springs, many of them have entirely subsided within the last three hundred years.

The Mammoth Hot Springs constitute a mountain of white and yellowish deposit, made from the mineral solutions contained in the immense volumes of water gurgling up from scores of boiling fountains. The first impression is that of a snowy mountain beautifully terraced, and on these terraces appear to be frozen cascades, as if the foaming waves in their rapid descent down the steep declivity had been suddenly arrested by the iron hand of frost. There are about sixty of these springs, of varying dimensions, extending over an area of a mile square, and remains of similar springs extend for miles around, and high hills of the same deposit now overgrown with pine-trees. The water is at the boiling-point, and contains in solution a great quantity of lime, sulphur, and magnesia, which have been slowly deposited in every form and shape as the water flows along in its course down the mountain-side.

On each level or terrace there is a large central spring, which is usually surrounded by a basin of several feet in diameter, and the water, after pouring over the beautifully wrought rim, forms hundreds of basins or reservoirs of every size and depth, the margins being delicately indented with a finish which resembles the finest bead-work. The character of the formation depends on the heat and flow of the water, as well as on the nature of the mineral matter with which the water is charged in any particular place. Where the water flows slowly, and without much heat, the smaller basins and terraces are formed, one below the other, with delicate partitions

and graceful fringes; but, where the flow is hot and swift, the basins are deeper and larger and the ornamentation coarser. The Rev. Mr. Stanley, who gave an interesting study of the Yellowstone Valley in his book entitled "Rambles in Wonderland," has the following description of these hot springs:

"Where the water flows quite rapidly, the pools are filling up, leaving the deposit in wave-like forms, just like water congealed when flowing over a cascade. Underneath the sides of many of the basins are beautifully arranged stalactites, formed by the dripping of the water; and, by digging beneath the surface at places where the springs are inactive, the most delicate and charming specimens of every character and form can be obtained — stalactites, stalagmites, grottoes, etc., all delicately arranged as the water filtrates through the crevices and perforations of the deposit. The larger pools, before the erection of bathing-houses, afforded a splendid opportunity to enjoy the luxury of bathing, as water of any temperature desirable could be secured. The sides of the mountain for



Liberty-Cap.

hundreds of yards in extent are covered with this calcareous incrustation, formerly possessing all the ornamental attractions of the springs now in action. It is a scene sublime in itself to see the entire area with its numerous and terraced reservoirs, and millions of delicate little urns, sparkling with water transparent as glass, and tinged with many varieties of coloring, all glistening under the glare of a noonday sun. But the water is constantly changing its channel, and atmospheric agencies have disfigured much of the work, leaving a great portion of it only the resemblance of an old ruin.

"Every active spring or cluster of springs has its succession of little urns and reservoirs extending in various directions. The largest spring now active, situated about half-way up the mountain on the outer edge of the main terrace, has a basin about twenty-five by forty feet in diameter, in the center of which the water boils up several inches above the surface, and is so transparent that you can, by approaching the margin, look down into the heated depths many feet below the surface. The sides of the cavern are ornamented with a coral-like formation of almost every variety of shade, with a fine, silky substance, much like moss, of a bright vegetable green, spread over it thinly, which, with a slight ebullition of the water keeping it in constant motion, and the blue sky reflected in the transparent depths, gives it an enchanting beauty far beyond the skill of the finest artist. Here all the hues of the rainbow are seen and arranged so gorgeously that, with other strange views by which one is surrounded, you almost imagine yourself in some fairy region, the wonders of which baffle all attempts of pen or pencil to portray them.

"Besides the elegant sculpturing of this deposit, imagine, if you can, the wonderful variety of delicate and artistically arranged colors with which it is adorned. The mineral-charged fluid lays down pavements here and there of all the shades of red, from bright scarlet to rose-tint, beautiful layers of bright sulphur-yellow, interspersed with tints of green—all elaborately arranged in Nature's own order. Viewed from the Tower Creek trail, which passes at the base, this section of the mountain has a very architectural appearance."

Just below the base of the principal terrace there is a large area covered with shallow pools, some of them containing water with all the ornamentations perfect, while others are fast going to decay, the decomposed sediment being as white as snow. Here we also find a remarkable cone about fifty feet in height and twenty in diameter, which is known as the "Liberty-Cap." This is probably the remains of an extinct geyser. The water seems to have been forced up with considerable power, and without rest, building up its own crater until the pressure beneath was exhausted, and then it gradually closed itself over at the summit and perished. No water flows from it now, and the layers of lime look like the layers of straw on a thatched roof.

As we continue up the mountain among the remains of dead springs we are obliged to wade through beds of magnesia as fine as flour, and find places where pure pulverized sulphur can be had by the cart-load. The mountain-side abounds in fissures caused by the settling of the deposit, forcing the springs often to change their channels. Then, again, we see mounds with deep cracks cleaving their sides,



Mud Springs.

within which gleam delicate sulphur-crystals, formed by the steam and gases emitted from the boiling caldrons below.

Certain parts of the mountain abound in caverns once the scene of boiling lakes. One of these, called "The Devil's Kitchen," has been partly explored; but the curious traveler is quickly repelled by the cloud of warm, sickening steam that pours out, and perhaps warned by the skeleton of a deer or an elk which had gone too near, and, blinded and suffocated by the exhalations, died on the verge of the seething water.

As we near these wonderful boiling springs, there is a natural hesitation about approaching too close to the edge, but, finding the crust solid, one gets bolder, and ventures to stand right over the steaming caldrons. There have been a few cases of venturous visitors falling through into the hissing water, with results too horrible to mention, but such accidents are soon forgotten. The various stalactites and other interesting mineral forms found about the little reservoirs, and in the caves and fissures, make fine cabinet specimens, and many place little baskets and picture-frames in the water, where shortly they become beautifully incrusted with sparkling varicolored crystals.

A ride of about twenty miles southeast from the Mammoth Hot Springs, through towering mountains cut by deep gulches and cañons, brings us to the famous Mud Springs, which are not less curious than those just described. These are scattered along on both sides of the river, extending on the hill-sides from fifty to two hundred feet above. The first one we notice has a circular rim about four feet high, within the basin of which boils up liquid mud. The diameter is about eight feet, and the mud so fine that it might be compared to a huge pot of hot mush. The escaping gas constantly throws up the mud, sometimes to the height of twenty feet. Another of these basins, not far away, is forty feet in diameter, the water just turbid and boiling moderately. Into it flow several small springs, thus lessening the heat. In the reservoirs where the waters boil up with considerable force, the temperature is only ninety-six degrees, showing the bubbling to be due to the escape of gas, for the bubbles stand all over the thick, whitish water. In some of the smaller mud springs the heat rises to the temperature of one hundred and eighty-two degrees. The mud which has been wrought in these caldrons for hundreds of years is so fine and pure that the maker of porcelain-ware would go into ecstasies at the sight. Often it is of such snowy whiteness as to resemble, when dried, the finest meerschaum. The color of the mud depends on the character of the ground through which the waters of the spring reach the surface. Originally the springs were clear, perhaps geysers or spouting fountains; but the continual caving-in of the sides has finally produced a mud-pot, just the same on a big scale as we see in a kettle of hasty-pudding. At first clear and hot, the water becomes turbid from the mingling of the earth with it, until at last it attains the character of thick mush, through which the gas bursts with a dull, thud-like noise. Every variation is found, from a sort of milky thickness to a stiff mortar. On the eastern bank of the Yellowstone are also seen several mud-springs strongly charged with alum and sulphur.

Not far from these mud-springs is quite a remarkable sulphur-mountain and a mud-volcano. Lieutenant Barlow gives the following description of these in his report to the Government:

"Toward the western verge of a prairie several miles in extent, above the Yellowstone Falls, a hill of white rock was discovered, which on investigation proved to be another of the 'soda mountains,' as the hunters call them. Approaching nearer, I saw jets of steam and smoke issuing from the face of the hill, while its other side

was hollowed out into a sort of amphitheatre, whose sides were steaming with sulphur-fumes, the ground hot and parched with internal fires; acre after acre of this hot volcanic surface lay before me, having numerous cracks and small apertures, at intervals of a few feet, whence were expelled, sometimes in steady, continuous streams, sometimes in puffs like those of an engine, jets of vapor, more or less impregnated with mineral substances. I ascended the hill, leaving my horse below, fearing that he might break through the thin rock-crust, which in many places gave way beneath the tread, revealing caverns of pure crystallized sulphur, from which hot fumes were sure to issue. The crystals were very fine, but too frail to transport without the greatest care. A large boiling spring emitting fumes of sulphur and sulphuretted hydrogen, not at all agreeable, was also found. The water from this spring, overrunning its basin, trickled down the hill-side, leaving a highly colored trace in the chalky rock. Upon the opposite side were found a great number of larger springs. One, from its size, and the power it displayed in throwing water to a height of several feet above the surface, was worthy of notice. Near this was a spring having regular pulsations, like a powerful engine, giving off large quantities of steam, which would issue forth with the roar of a hurricane. This was in reality a steam volcano; deep vibrations in the subterranean caverns extending far away beneath the hill could be distinctly heard.

"The country from this point to the mud volcano, a few miles above, was mostly rolling prairie, intersected with several streams flowing into the river, some of them having wide estuaries and adjacent swampy flats covered with thick marsh-grass. Ducks were usually found in these sluggish streams, as well as in the little lakes so numerous throughout the whole region. We camped on the bank of the river in the immediate vicinity of the mud geyser. This being the first specimen of the true geysers yet seen, it was examined with great curiosity. The central point of interest, however, is the mud volcano, which has broken out from the side of a well-timbered hill. The crater is twenty-five feet across at the top, gradually sloping inward to the bottom, where it becomes about half this diameter. Its depth is about thirty feet. The deposit is gray mud, and has been thrown up by the action of the volcano at no very distant period. The rim of the crater on the down-hill side is some ten feet in height, and trees, fifty feet high and a hundred feet distant, are loaded with mud from this volcano. The surface of the bottom is in a constant state of ebullition, puffing and throwing up masses of solid mud and sending forth dense columns of steam several hundred feet above the surrounding forests. This vapor can be seen for many miles in all directions. Some four hundred yards from this crater are three large hot springs of muddy water, one of which proved to be a geyser, having periods of active eruption about every six hours. The phenomena attending these eruptions are as follows: Soon after the violent period passes, the water in the pool gradually subsides through the orifice in the center, the surface falling several feet, the water almost entirely disappearing from sight. It then gradually rises again till the former level is reached, during which occasional ebullitions of greater or less

magnitude occur. Great agitation then ensues; pulsations of a regular interval of a few seconds occur, at each of which the water in the crater is elevated higher and higher, until finally, after ten minutes, a column is forced up to the height of thirty or forty feet. During this period waves dash against the side of the basin, vast clouds of steam escape, and a noise like the rumbling of an earthquake takes place. Suddenly, after about fifteen minutes of this commotion, the waves recede, quiet is restored, the waters sink gradually to their lowest limit, from which they soon rise again and repeat the same operation."



Grand Cañon of the Yellowstone.

By riding up the river a few miles from this point we reach the falls and the Grand Cañon of the Yellowstone, which are among the most wonderful features of a wonderful region. Not far from the falls rises Mount Washburn, a majestic mountain which lifts itself to the height of 10,480 feet, the summit of which may be reached on horseback without much difficulty. The prospect from the summit is grand, as it includes the very crown of the continent, where the great rivers, the Columbia, the Colorado, and the Missouri, in small streams plunge down rocky defiles to the fertile valleys below, increasing in volume as they flow toward every point of the compass. To the south and west may be seen the summits of the Rocky Mountains, the great

divide of the continent. Still farther to the south are the Three Tetons, rearing their cloud-capped peaks far above their surroundings. To the west and northwest are the Gallatin and Madison ranges, their tops seeming to melt away in the dim distance into the very clouds. To the northward spread before us is the wonderful Yellowstone Valley, with its thousands of boiling springs. On the eastward boundary of one's vision may be seen the Snowy range, extending far southward to Emigrant Peak east of the Yellowstone, marking the divide between that stream and the Rosebud and Big Horn. All around is a chaotic mass of peaks, reminding one of leaning towers, pyramids, castles, and here and there showing the perfect profile of a human face. To the south is the basin of the upper Yellowstone, once the seat of a great inland sea; then, again, the center of volcanic powers, probably almost unrivaled in the physical history of the globe; now the scene of mud-volcanoes, boiling springs, and spouting geysers, which send on high their pillars of steam. In the southeastern portion of the horizon lies Yellowstone Lake, whose mirror-like surface gleams like liquid silver in the sunlight. Rising beyond the lake are the Wind River Mountains, whose summits form the divide between the Yellowstone and Wind Rivers, the tops mantled with glittering glaciers which human foot has never trod, and which the Indians consider "the crest of the world."



Upper Falls of the Yellowstone.

According to the legend of the Blackfeet Indians, the red warrior may look from these snow-crowned heights over into the happy hunting-grounds, with its enchanting lakes and rivers, its delightful landscapes, balmy breezes, and cloudless skies, the abode of the happy spirits, who chase for ever the antelope, elk, and buffalo—a land

where the intruding white man may not come. At our very feet toward the east may be traced the outlines of the Grand Cañon, extending twenty miles down the river from the falls. Great pine-forests stretch away in every direction as far as the eye can reach, mantling the table-lands and undulating hills with rich green. Such a magnificent outlook repays well, indeed, the toils of a not very difficult ascent.

A ride of ten miles from our camping-ground at the base of Mount Washburn, following a zigzag track through fallen timber and dense pine-forests, brings us to the head of the Grand Cañon of the Yellowstone. As we approach, the mighty roar of the falls warns us that we are near, and we soon emerge from the last fringe of woods and stand on the brink of the great chasm silent with astonishment. The Grand Cañon is a ravine from one to two thousand feet deep, into which the river pours over a precipice, making what is called the Upper Falls. The stream, after flowing through a beautiful, meadow-like valley, and winding along the shade of a charming woodland with a current so clear that the swimming fish may be seen, is suddenly compressed to one hundred and fifty feet in width, and dashes over a wall one hundred and forty feet high. A quarter of a mile below it is again narrowed between two walls, and makes the prodigious leap of three hundred and fifty feet into the boiling abyss beneath, thus having a perpendicular fall of five hundred feet within a few hundred yards. Far down the gloomy cañon the stream is narrowed, till it seems a mere green ribbon dashing with arrow-like swiftness down rapids, spinning around jutting rocks, and wasting its strength in boiling waves against the massive walls that tower above them. From the gloomy depths of the cañon the river finally emerges at the mouth of Tower Creek, many miles below.

The two great water-falls have crept backward, gradually eating their way through the lavas and leaving below them the ravine of the Grand Cañon. The weather has acted on the sides of the gorge, scooping and carving them into a series of bastions and sloping recesses, the dark forest above sweeping down to the very brink on both sides. Mr. Archibald Geikie, a well-known English scientist, gives us the following impressions of the cañon as seen in a recent visit:

"We spent a long day sketching and wandering by the side of the cañon. Scrambling to the edge of one of the bastions and looking down, we could see the river far below, dwarfed to a mere silver thread. From this abyss the crags and slopes towered up in endless variety of form, and with the weirdest mingling of colors. Much of the rock, especially of the more crumbling slopes, was of a pale sulphur-yellow. Through this groundwork harder masses of dull scarlet, merging into purple and crimson, rose into craggy knobs and pinnacles, or shot up in sheer vertical walls. In the sunlight of the morning the place is a blaze of strange color, such as one can hardly see anywhere save in the crater of an active volcano. But as the day wanes, the shades of evening sinking gently into the depths blend their livid tints into a strange, mysterious gloom, through which one can still see the white gleam of the rushing river and hear the distant murmur of its flow. Now is the time to see the full majesty of the cañon. Perched on an outstanding crag one can look down the ravine and mark

headland behind headland mounting out of the gathering shadows and catching up on their scarred fronts of yellow and red the mellower tints of the sinking sun. And above all lie the dark folds of pine sweeping along the crests of the precipices, which they crown with a rim of somber green. There are gorges of far more imposing



Column Rocks.

magnitude in the Colorado Basin, but for dimensions large enough to be profoundly striking, yet not too vast to be taken in by the eye at once, for infinite changes of picturesque detail, and for brilliancy and endless variety of coloring, there are probably few scenes in the world more impressive than the Grand Cañon of the Yellowstone. Such at least were the feelings with which we reluctantly left it to resume our journey."

The Upper Falls, though not so high, yet being nearer the world of sunlight, get the play and flash of brightness on their waters, and for this reason have a picturesque beauty peculiarly their own. Part way down their leap the volume strikes a sort

of bench, which breaks the mass into jets and showers of foam. The clouds of spray glitter with crystal beauty, and enchanting rainbows arch the ascending mist. One can easily descend to the foot of the precipice, and, though he will be drenched with spray, there is such charm of color, form, and movement in the vision, that he is loath to depart. The grass and small shrubs grow profusely wherever the mist is scattered, and the deep emerald hue makes a charming contrast to the glaring white of the falls and the somber look of the cañon-walls.



Lower Falls of the Yellowstone.

But the Lower Falls, owing to their great height and the imposing surroundings, make the center of attraction. Here the cañon lifts its walls fully two thousand feet above the bed of the stream, the sides being carved into the most weird and grotesque forms, as well as into architectural shapes of great regularity, all arrayed in the most varied colors. The fall at first sight does not look so high as one expects, owing to the massiveness of the cañon, but its grandeur grows rapidly on the mind. It presents the appearance of a symmetrical and unbroken sheet of snow-like foam, or silver tapestry suspended from the vast pillars above, set in dark masses of rock, on either side forming a beautiful background, and disappearing in a cloud of ascending spray which is tinged with mellow sunlight and colored with brilliant rainbows. Says Mr. Langford, one of the first explorers: "A grander scene than the lower cataract of the Yellowstone was never witnessed by mortal eyes. The volume seemed to be

adapted to the harmonies of the surrounding scenery. Had it been greater or smaller, it would have been less impressive. The river, from a width of two hundred feet above the fall, is compressed by converging rocks to one hundred and fifty feet where it takes the plunge. The shelf over which it falls is as level as a work of art. The height by actual line-measurement is three hundred and fifty feet. It is a sheer, compact, solid, perpendicular sheet, faultless in all the elements of picturesque beauty." The rocks on either side are beautifully decorated with vegetation and many-tinted mosses, and on one side, overshadowed by the pine-crested wall, may be seen a bank of snow which never melts. The volume and swiftness of the liquid mass in this dizzy plunge cause the water to rebound for a considerable distance in the air. It is thus dashed against the cañon-walls and churned into a perfect white whirlpool of boiling foam. Perhaps we get a more vivid notion of the great force of this cataract by watching it from below, to which it is possible, but not easy, to scramble at some peril of life and limb.

The view here is of the most impressive kind. The river, so small from above, has become a madly raging torrent, lashed into foaming waves, while the stately pines at the top of the wall appear dwarfed into little shrubs. We appear to be in a chamber so vast as to stun and daze the fancy, the great walls of the gorge seeming to be a fatal prison. The sides of them, delicately carved and painted with the richest colors, are arched over by the blue sky, and the sunlight warms the upper part of the picture with a mellow brightness that relieves the utter grimness of the gloomy depths where we stand. The roar of the cataract echoes through the cañon-walls, mingling with that of the torrent below, while, above and beyond all, the eye and imagination are fascinated by that immense solid sheet of foaming white which pours down in unchanging volume in that astonishing leap of three hundred and fifty feet. The spectacle is alike awful and beautiful, and calculated to stir in the mind of every spectator feelings of astonishment and delight.

At the lower mouth of the Grand Cañon there is another deep and gloomy cañon running into it laterally, which is known as "The Devil's Den." Through this flows Tower Creek for about ten miles, emptying itself through this great defile into the Yellowstone River. About two hundred yards before it empties its waters into the main stream it leaps over an abrupt descent of one hundred and fifty-six feet, making a most picturesque fall, though it excites but little amazement after having just seen a grander example of Nature's handiwork. This is called Tower Falls. The softer rocks on the sides of the cañon have been worn away, leaving columns of volcanic breccia of every size and form, from ten to fifty feet in height. They stand like old castles and towers, or send up thin, slender forms, like church-domes, or the spiral minarets of Moslem temples. One characteristic of all these cañons is the great variety of color on the rock-walls, all the shades of red, brown, yellow, and green, uniting with the numerous fantastic shapes to impress the imagination and charm the eye.

Starting from camp just below the upper falls of the Yellowstone, a ride west-

ward carries us over the beautiful prairie, matted with grass and spangled with flowers, which for the most part fills the region between the Yellowstone and the Madison Rivers. Mountains in the distance clad with somber pine-forests fringe the borders of the prairie-park, and the air is touched with a delicious coolness from blowing over the long stretch of snowy peaks. All along the route may be seen here and there a hot spring, and the rich green of the verdure contrasts startlingly with the hard and iron-looking crust which surrounds these seething little fountains. About a day's travel — perhaps forty miles — brings us to the verge of the most curious volcanic exhibitions of the Yellowstone Valley, the famous geysers. The latter part of the journey has been down steep mountain-sides and through almost impenetrable forests, but the expectation of soon reaching a most interesting display of Nature's powers dispels all fatigue, and keeps the mind keenly alert. Suddenly we find ourselves in the Lower Geyser Basin, situated on the Firehole River, the principal branch of the Madison. Here is an open space of several square miles in the thick forest, which grows along the foot of the neighboring hills, containing a great number of hot springs, surrounded by all sorts of fantastic forms—lakes of hot water, genuine geysers, and manifold curiosities—all the result of internal heat seeking an outlet. While the springs here are much more numerous, they do not attain the grand proportions of those of the Upper Geyser Basin, though a few of them throw water to the height of fifty feet. Continuing our journey southward up the Firehole River, we arrive at the Upper Geyser Basin, which, for most tourists, is the great center of attraction in the National Park.

Let our readers fancy a clearing in a dense forest, where the trees have evidently been destroyed by volcanic agencies, for numerous trunks and tree-branches are found imbedded in the deposit around the geysers and springs, and indeed all over the basin. The portion containing the principal geysers extends up and down the river about a mile, with a width of from a quarter to a half mile, interspersed with scattered pine-trees and little groves. The basin is covered with a whitish crust, ordinarily hard enough to hold the weight of a horse, though here and there are found boggy, treacherous places. Around the geysers and principal springs are various mineral deposits, shaped into all conceivable forms — cones, pyramids, castles, grottoes, etc. Steam-vents, from half an inch to five feet in diameter, everywhere perforate the surface, and pour forth clouds from their thousand orifices, while caldrons of boiling water seethe and roar all around. The bright sunlight pouring down on the steam-clouds transfigures them into the richest colors, making a picture to delight the eye of the painter. The first geyser which attracts our attention is called the "Old Faithful," from the regular intervals with which the water spouts. This geyser stands as a sentinel on an eminence near the head of the basin, and on the west side of the river. The grand display of subterranean water-works is as regular as the running of clock-work. The crater of this geyser is about thirty feet above the common level, with a huge spout projecting five or six feet higher, in the shape of a chimney. As we approach this little steam-volcano, there are a sudden rumbling and quaking of the earth under the



Tower Falls.

feet, followed by a rush of steam and water from the crater, and in an instant there is a grand eruption, a huge volume of clear hot water hurled into the air about a hundred and fifty feet high, while dense clouds of steam rise up hundreds of feet and slowly roll away into the sky above. So great is the force beneath which impels the mighty steam-jet, that the lofty fountain remains undisturbed for several moments, only rocked to and fro by the light breezes, while the water pours down on all sides and floods the slopes of the mound. The spectacle is one which fills the beholder with amazement and pleasure, hardly to be realized from mere description. The immense mass of liquid ejected from the water-volcano forms a perfect apex at the top, and, having spent its energy, descends on the outside of the ascending pillar, giving it, when the wind drives away the steam, the aspect of a sugar-loaf. The sparkling water-column, churned into foam by its own force, and breaking into millions of bright drops, glittering in the sunlight, is a spectacle of marvelous beauty. The water frequently rises in successive jets, each a little higher than the preceding, as if the force beneath were guided by an intelligent will letting on the power by degrees. Aft-

er it has maintained its greatest altitude for a few moments, it descends in the same way, till the power is spent. When the spouting monster becomes quiescent we approach the brink or orifice and gaze down its throat, and there, many feet below, one hears the water fiercely gurgling and collecting its energies for another outburst.

Around the crater the deposit is incrusted, of metallic, grayish sand. The sides of the mound are chiseled into variously shaped urns and basins in successive terraces, like those of the Mammoth Hot Springs, all these reservoirs being full of clear water. The borders of these water-bowls are exquisitely wrought, as if with beads of pearl of various tints. In some of them are to be seen in the water little stems surmounted by caps, reminding the looker-on of vegetable growths like mushrooms or curiously shaped flowers. Then, again, we see stalagmites and coral-like forms of every tint and



The Great Geyser Basin.

texture. These delicate forms grow amid a cloud of water and spray, and their colors are as bright and the lines as finely wrought as those of a butterfly's plumage, though the material is so hard that it requires the blow of a hatchet to get a specimen. So beautiful and variegated in form and tint are they, that one might almost fancy himself in fairy-land.

Leaving this geyser and crossing the river on a fallen tree, we find, about three hundred yards distant, down the stream, a little cone perfectly symmetrical in form some three feet high and four feet in diameter at the top, with a base of nearly double the size. The aperture of eruption is eighteen inches, and its edges prettily beaded. This is the Bee-hive Geyser, so named from the suggestion of its shape. Though it acts only once in three or four days, the great beauty of its eruption makes

it celebrated with visitors. The column of water and steam ascends to an altitude of two hundred feet in a perfectly graceful form, without any jerk or intermission, and continues in action for fifteen minutes, during which the spectator has ample time to study its beauties.

On the same side of the river, but about two hundred yards to the eastward, on the summit of a little knoll, is the Giantess, which is one of the most magnificent geysers in the basin, in action, though very capricious in its times of display. The orifice is about twenty-five feet in diameter at the surface, and filled to the brim with water, which ordinarily remains just below boiling-heat. The casual observer would think it merely a large mineral spring, did he not observe the huge channels carved out of the slope by the descending torrents of hot water which have been hurled high into the air. The geyser looks quiet and untroubled, and there is nothing to indicate the terrible activity which it is able to assume so promptly.

An hour or two later all is changed. Repeated detonations, like claps of thunder, shake the ground, and the roar finally becomes as regular as cannonading on the battle-field. The trembling of the earth and the crash of sound fill the unaccustomed ear with terror, as if some great catastrophe were about to occur. There are a rumbling and rushing of water to and fro in the deep reservoir, and a hissing as of the escape of steam from powerful engine-valves. On approaching the geyser close to the brink, we find the hitherto full pool emptied to the depth of fifty feet, and the water heaving with a terrible convulsion, throwing occasional jets of water out of the crater. The water, perhaps, recedes finally entirely from view, and the gloomy, grim, dark walls are seen to their full depth. If a great eruption is about to occur, the water fills the huge reservoir again with great rapidity to within a few feet of the surface; there is a fearful concussion that shakes the ground more violently than ever; immense clouds of steam rise five hundred feet high, and the whole body of water, about twenty-five feet in diameter, ascends in a column to the height of ninety feet. From the apex five great jets shoot up, radiating outwardly from each other, to the astonishing height of two hundred and fifty feet. The earth trembles with the descending deluge, and a hissing as of innumerable serpents fills the air, while brilliant rainbows dance high up on the quivering summits of the jets. The sides of the declivity are channeled by the falling streams, and the steaming flood pours down the slope into the river. After twenty minutes of this splendid exhibition the eruption subsides almost instantly, the water lowers in the crater, and all is quiet again, as it was, a placid pool instead of a fountain of boiling wrath and terror. All around this grand geyser are small springs and caldrons, crowning little knolls, and many of them spouting little jets, like children emulating the examples of their elders.

By crossing Firehole River again to the west side, and going a short distance down the stream, we observe on the borders of a little grove an object somewhat like the ruins of an old castle. This, in fact, is known as Castle Geyser, and consists of a mound several feet high, crowned with a chimney-shaped crater of ten feet in height and perhaps eight feet in diameter. Ascending by regular steps, we come to the

orifice, which is three feet wide, and surrounded by globular masses, which look not unlike coral. This geyser often sends up water to a height of twenty or thirty feet, sometimes, indeed, rising to the elevation of fifty feet, and continuing in action for several hours. It is believed that this geyser was in its day one of the grandest of all, but it is now in its decadence, though still at times giving fine exhibitions of spasmodic power.



The Giantess.

The Grand Geyser is on the east side of the river, about an eighth of a mile from the foregoing one, and, unlike most of its brethren, has no raised cone, but only a funnel-shaped basin sinking below the level, and some forty feet in diameter. The water is very quiet when not spouting, and one would hardly suppose that this, and not an adjoining one, called the Turban, which is continually sputtering, was a grand exhibition of Nature's power. But such, indeed, is the case. The same spring suddenly wakes to terrible energy, and its babbling neighbor is reduced to silence and insignificance. It ejects a column of water the size of its aperture into the air to a height of two hundred feet, with dense clouds of steam, while the internal roarings seem to shake the earth to its center. It spouts at intervals of twenty-four hours, and its action lasts fifteen or twenty minutes. A traveler who was fortunate enough to see this geyser in action—for it spouts at very irregular intervals—thus describes it:

"At daylight on the morning after our arrival I was aroused from a refreshing slumber by fearful subterranean reports, as regular as pulse-beats, just as though an enormous hammer was being hurled with wonderful force against the very foundation of the earth immediately beneath us; and, guided by the noise, I arrived just in time to see the geyser in action. The basin was nearly full of water, agitated by the escape of dense masses of steam, when, all at once, with another report as if from the engineer below giving the signal to commence, and with but little effort, a column of water gracefully rose to the height of nearly one hundred and fifty feet, and was kept in position at that altitude for several minutes, the descending masses flowing away in a large stream, and the immense volumes of steam lingering around, mantling the beautiful fountain and thus depriving us of a good view. The column at first, however, arose above the steam, and, after its force was spent, retired within the funnel out of sight. It was not one of her grandest efforts, but sufficient to give the spectator some idea of its glory."



The Giant Geyser.

Not far from this spouting fountain is an industrious geyser known as the Sawmill, which is in action at least half the time, and the manœuvres it performs are not a little comical. The orifice is only six inches, surrounded by a shallow basin twenty feet in diameter. When in action the basin brims over, and the steam, puffing up through the aperture, makes

a noise like steam escaping from the pipe of a saw-mill. It raises a large body of water several feet, and then successive columns of steam raise it higher, till it reaches twenty-five feet, when it descends in a shower of crystalline spray.

Everywhere in this basin are springs, geysers, and small apertures, through which jets of steam pour into the air. At times these steam-holes, as they may be called, are inactive, and then there is no special mark of their function. Amusing stories are told of incautious travelers sitting down on the ground in the shadow of some friendly tree, and thinking themselves very comfortable till these subterranean steam-pipes begin to play. Suddenly the weary tourist jumps into the air as if a yellow-jacket had stung him, and rubs the seat of his trousers.

Following the river down on the east side we pass numerous cones, hot and cold springs, till we come to the Riverside Geyser, with an oddly formed crater. This is almost constantly in action, but of moderate pretensions in the height of its column. Not far away from here the trimly shaped crater of the Comet attracts the eye, a name given from the appearance of the crater when in action. At the lower extremity of the Upper Basin is the Fantail Geyser, one of the most interesting spouters of the region. Its working machinery is quite complicated, as it has five distinct orifices, which send up as many jets of water and steam, sometimes to the height of a hundred feet, which ascend and descend in such a fashion as to suggest the outlines of a fluttering feather fan. It spreads its watery plumes three or four times a day, and makes a display so fine as to be an object of great enthusiasm to the majority of visitors.

Let us recross the river once more and pursue our course up the west bank, a short distance of a hundred yards, till we come to a cluster of springs, at one side of which, on a bed of fine white sand, stands a grotesque mound about twenty feet above the general level. This is the crater of the Grotto Geyser, noted chiefly for the curious and irregularly shaped walls surrounding the orifice, and their beautiful effects of form and color. The deposit is formed into pillars, arches, and walls, with projections and turrets so quaintly jumbled together as almost to defy description. One might easily crawl through many of the openings in the sides of the walls when they have sufficiently cooled after an eruption. This geyser throws up a great volume of water three or four times a day to the height of sixty feet, and would be an object of much interest were it not so near the Giant Geyser, which is only two hundred yards away.

The latter geyser makes all its wonderful brethren commonplace, and is without question the most gigantic boiling fountain in the world, a phenomenon so grand as in itself to make a trip to the Yellowstone Basin well worth the while. This marvel is one of a group of three orifices, or craters, all in a row and in close proximity, together with a small vent, a little way off, which continually emits jets of steam like the discharge from the escape-pipe of an engine. They are grouped on a slight elevation about a hundred yards in diameter. The Giant, of course, is the great center of interest and curiosity, and looks like the base of a broken horn, or it may be com-

pared to the stump of some great hollow tree, the top of which had been broken off by the sweep of a tornado. This huge stone stump projects about twelve feet above the platform, with a diameter of eight or ten feet at the top. Some unusually violent eruption has torn away part of one side, while at the base irregular swellings and ridges resemble the roots of an oak. As we clamber up the side and look down into the vent, we see dark stains and protuberances, and hear the raging tumult of the water and steam far down in their subterranean depths.

All the orifices are connected below, and belong to the same system. The continual internal throbbings make one think of the firemen of the infernal regions engaged in shoveling in fuel and getting ready for a display. Suddenly, as we watch with anxious eyes, the little steam-jet, which is generally puffing, ceases its action, and the geyser nearest begins to throw out great volumes of water to an altitude of some thirty feet. It plays a few moments, and gives way to the next, which spouts bravely for a short while. These are the heralds of the mightier force gathering its resources for action. For a moment all is still, and then, with a rumbling and roaring as of thunder, the Giant begins its work. The earth seems to groan, and the power to be sufficient to tear the solid walls of the crater into a thousand atoms.

A volume of boiling water, of the size of the nozzle of the crater—that is to say, of a diameter of about ten feet—is suddenly hurled to a great height, the action being repeated several times. Then for a moment all is quiet again. But now it begins in earnest, and the fountains of the subterranean depths seem to be broken up and turned loose on the world. A steady column of water, graceful, majestic, and upright as a pine-tree, except when swayed slightly by the passing breezes, is by rapid and successive impulses impelled upward till it reaches the amazing elevation of two hundred feet. At first it appeared to labor in lifting the great volume of water, but it is now with perfect ease that the stupendous column is held to its place, the water breaking into jets on the topward curl of descent and returning in glittering showers. For thousands of feet above, the dense clouds of steam are borne away on the winds, shimmering with rainbows and swaying in a thousand broken and irregular forms. The turmoil attending this grand spectacle is as the roar of artillery, the galloping of a cavalry-charge, or the sweep of a tornado through the air. The performance lasts for about an hour and a half; during the latter portion of the time, however, the emission consisting principally of steam. The force of the discharge may be appreciated in the fact that heavy rocks thrown into the ascending flood are hurled many feet into the air. The amazing beauty of such a sight as this is beyond the power of words to describe, and all that can be done is merely to indicate the impression it makes on the most unsusceptible minds.

We have only attempted to notice the principal geysers of the basin, though smaller ones exist by the hundred, spouting intermittently throughout the whole of this region. The volcanic force which underlies these phenomena is now failing in activity, and, a thousand or two years hence, the geysers will probably cease to be. What the terrible grandeur of this region must have been once, when the internal

forces were at their greatest, can hardly be reached by the wildest stretch of the imagination.

We owe to Chevalier Bunsen, who united so happily the gifts of the *savant* and diplomatist, the true theory of geyser-eruptions, founded on a study of the Iceland geysers nearly forty years ago. He proved by a series of careful experiments that the heat of the water in the geyser-tube varies at different depths, and also at different



Yellowstone Lake.

periods between two eruptions, the change always taking place in the same manner, and with considerable regularity. Immediately before the eruption the greatest heat at the bottom of the well was discovered to be about sixteen degrees less than what would be the boiling-point of water at that depth. The water, therefore, in no part of the tube was hot enough to generate steam under the conditions. But the higher you ascend in the tube the lower is the temperature at which water will boil. If, then, the column be thrown up by the generation of steam in the under-ground channels, the water at the bottom of the tube, which is near the boiling-point, is brought to a height where it is sufficiently relieved from pressure to be converted into steam. The water in the tube is lifted still higher till the steam condenses by contact with the cooler water, to which it imparts its latent heat. Each condensation makes a loud report—the explosion which precedes eruption. By successive efforts, enough of the weight of the water above is thrown off to raise nearly all the water in the tube to the boiling-point, until at last the relief from pressure permits the contents of the tube to be ejected into the air to a greater or less height, according to the volume of the steam which acts as the lifting power.

From the geyser-region to the Yellowstone Lake the easiest trail or route is to return by the Lower Basin, thence across to the Mud Geyser, and so up the west bank of the Yellowstone River to one of the most charming sheets of water on the continent. The distance is easily within a day's ride, and both the scenery and atmosphere are delightful. Suddenly we emerge from the heavy forest, shaded by high mountains, into a picturesque, grassy park in which lies this famous lake—for so it has become by virtue of its beauty, however capacity for wonder and pleasure may have been blunted by the strange sights which are so thickly scattered throughout this region. This mountain reservoir is about fifteen miles in width, and twenty or twenty-five miles in length. The shores are indented with bays and inlets which are fringed with pine-forests, that contain now and then a meadow-like opening, to add to the variety and beauty of the scene. Mr. Langford, for many years the superintendent of the park, thus describes the beauties of this inland sea:

"Secluded amid the loftiest peaks of the Rocky Mountains, possessing strange peculiarities of form and beauty, this watery solitude is one of the most attractive objects in the world. Its southern shore, indented with long, narrow inlets, not unlike the frequent fiords of Iceland, bears testimony to the awful upheaval and tremendous force of the elements which resulted in its erection. The long pine-crowned promontories, stretching into it from the base of the hills, lend new and charming features to an aquatic scene full of novelty and splendor. Islands of emerald hue dot its surface, and a margin of sparkling sand forms its setting. The winds, compressed in their passage through the mountain-gorges, lash it into a sea as terrible as the fretted ocean, covering it with foam. But now it lay before us calm and unruffled, save as the gentle wavelets broke in murmurs along the shore. Water, one of the grandest elements of scenery, never seemed so beautiful before."

This lake reposes on the crown of our North American Continent, near the sources of three great rivers of the United States, at a height of nearly seven thousand five hundred feet, far above the loftiest clouds that cast their shadows over New England homes, or float in the blue sky of the sunny South. Professor Hayden, who made the first scientific survey of the Yellowstone region, thus speaks of the lake:

"On the 28th of July (1871), we arrived at the lake, and pitched our camp on the northwest shore in a beautiful grassy meadow, or opening, among the pines. The lake lay before us, a vast sheet of quiet water, of a most delicate ultramarine hue, one of the most beautiful objects I ever beheld. The entire party were filled with enthusiasm. The great object of all our labors had been reached, and we were amply repaid for all our toils. Such a vision is worth a life-time, and only one of such marvelous beauty will ever greet human eyes. From whatever point of view one may behold it, it presents a unique picture. We had brought up the frame-work of a boat, twelve feet long and three and a half feet wide, which we covered with stout ducking, well tarred. On the morning of the 29th inst., Messrs. Stephenson and Elliot started across the lake in the Anna, the first boat ever launched on the Yellowstone, and explored the nearest island, which we named after the principal assist-

ant of the expedition, who was undoubtedly the first white man that ever set foot on it. . . . Usually in the morning the surface of the lake is calm, but, toward noon and after, the waves begin to roll, and the white caps rise high, some four or five feet. Our little boat rode the waves well; but, when a strong breeze blew, the swell was too great, and we could only venture along the shore. The lake is about twenty-two miles in length from north to south, and an average of ten to fifteen miles in width from east to west. It has been aptly compared to the human hand; the northern portion would constitute the palm, while the southern prolongations or arms might represent the fingers. There are some of the most beautiful shore-lines along



Hot-Spring Cone.

the lake that I ever saw. Some of the curves are as perfect as if drawn by the hand of art. Our little boat performed most excellent service. A suitable frame-work was provided in the stern for lead and line, and a system of soundings was made that gave a very fair idea of the average depth of the lake. The greatest depth discovered was three hundred feet. It is fed by the melting of the snows on the lofty mountains that surround it on every side. The water of the lake has at all seasons nearly the temperature of cold spring-water. The most accomplished swimmer could live but a short time in it; the dangers attending the navigation of it are thereby greatly increased. The lake abounds in salmon-trout, and is visited by great numbers of wild fowl."

Professor Hayden tells us that on some portions of the lake-shore hot springs, with their funnel-shaped craters, project out into the deep waters of the lake. Standing on one of these mounds, he caught trout in the lake, and dropped them into the boiling water, where they were perfectly cooked without being taken off the hook. The forests surrounding the lake abound with bear, deer, elk, and other noble game, and offer the most attractive inducements to the hunter.

But we can not linger much longer over this fascinating region. When the Northern Pacific Railway is completed, pilgrims in search of the beautiful and wonderful from all portions of the world will resort hither. The climate is most pure and invigorating during three months of the year, with scarcely any rains or storms. But the thermometer often sinks as low as twenty-six degrees, and there is more or less frost every month of the year. As a place of summer resort for invalids as well as for mere tourists, it is believed that it will scarcely be surpassed by any portion of the world. By the congressional act, which created this region a national park, provision was made for beautifying it in all ways consistent with the natural loveliness and grandeur which it so richly possesses. The earliest tourists, who were drawn to the Yellowstone Valley by reports of its wonders, met with thrilling adventures with the hostile Indians; and those who, ten years hence, are able to find luxurious hotel accommodation, as seems now probable, will hardly be able to persuade themselves that the lovers of the beautiful, who, only a quarter of a century before, penetrated hither, had literally to fight their way in and out through a cordon of fierce savages.

SKETCHES OF INDIAN LIFE.

The red-man of the plains—The Indian dandy at the trading-post—How the post-trader treats the savage—Condition and traits of Indian women—An Indian carnival—Religion and customs—Funerals, and the Indian reverence for the dead—Love-making—The Indian as a hunter—Methods of pursuing the elk—Buffalo and moose hunting—Getting salmon on the Columbia River—The craft and skill of the red-man.

In our wanderings over the plains and mountains, and among the forests of the great West, the red-men, whether lounging in peaceful guise on their reservations, or scouring the wilderness in their war-paint on the hunt for scalps or plunder, can not fail to be of great interest, though an interest oftentimes mixed with disgust, fear, and wrath—sometimes, perhaps, it may be, with pity and regret. The victims of a treatment which appears to be common in the history of the world, wherever a superior race comes in contact with a weaker one, they have much to justify the frequent outbreaks and frontier wars which make life and property in certain portions of the far West so insecure. Yet actual contact with the Indian in his daily modes of life is far from begetting respect or liking, however much we may be interested or amused. It is not our purpose now to consider the red-man as a warrior or the avenger of wrongs, but to look at him in his pacific aspects. We shall find that, however brutal and repulsive he may be in many ways, there is yet a good deal of universal human nature in this "image of God" cast in red bronze.

Foremost among the acquired traits of the Indian is his passionate fondness for fire-water. For a good supply of this he is willing to part with his buffalo-robes, his ponies, his squaw, even his rifle, the possession of all dearest to his heart. To get drunk is the paradise of the half-civilized Indian, who may be seen hanging around the forts and trading-posts, and the dispenser of the delicious beverage commands more of his admiration and homage than the Great White Father at Washington. Of course, there are occasional exceptions to this rule, but the Indian who does not love the inebriating cup is a rare being.

The visits of the red-men to the trading-posts or forts often afford many amusing incidents, and give singular glimpses of the whimsical notions of this untutored people. Next to the love of whisky, his fondness for showy garments is the most predominant quality. He is prone to seize on any cast-off garment, any stray feather or ornament he can find, beg, borrow, or steal, and with huge delight adorn his dusky person with it without delay. A dandy is not exclusively the product of civilized

life. The most degraded phases of Indian life are made amusing and ridiculous by genuine fops whose self-conceit overtops the "howling swells" who parade in Fifth Avenue, New York, or Hyde Park, London. A "warrior" chief on a strut is a



Indian Dandy.

fair rival for the most puffed-up turkey-cock that ever gobbled in a farmer's barn-yard, though there is something formidable in the Indian's vanity, as it lies close to blind ferocity when crossed or offended. The illustration of an Indian dandy which

we give was drawn from the life at a reservation trading-post in the far West. It represents a youth of twenty, who has accompanied his tribe to the fascinating place. From the proceeds of his mother's industry or some little labor of his own, perhaps as a gift from some good-natured white man, our copper-skinned dandy finds himself in possession of an old uniform coat with epaulets and brass buttons, a bottle of whisky, and other civilized articles. His fine figure, well-made lithe limbs, and perfect satisfaction with himself, give a most grotesque and droll aspect to this display. The strutting fellow looks around with eager eyes to notice the gaze of envy and admiration which he thinks his due. And the other Indian idlers do not fail to look on this glorious and favored being with unconcealed longing. One old "stager," inspired with an ambition to shine, has borrowed a Scotch cap, an article which the Indians delight in, and, crowned with this article of distinction and a huge club, he waddles on in the rear of his younger and more shining rival. The most offensive Indian fop is found among the male relations of some Indian belle who has married a white man, especially if the latter has a store or is the agent of a fur company. At all seasons these hungry and thirsty expectants hang about like a flock of turkey-buzzards, anxious for such trifling favors as fire-water, sugar, coffee, and similar gifts, which the great man has the power of bestowing.

The store of a trading-post illustrates the method of the white man's average dealings with his red brethren. Here we often find a number of hard-working squaws who present themselves with a load of peltries or dressed furs, the result of an entire season's hard toil, of hunting or trapping on the part of the "buck"; of curing, drying, and tanning on the part of the woman. The buffalo, beaver, otter, mink, and other furs, are beautifully dressed, mayhap wrought with beads and stitched work. These tasteful specimens of the forest mother's and maiden's handiwork are given to the heartless swindling trader for a few ounces of brown sugar, and that of such vile quality that it seems to practiced eyes like mere grains of sand, stained with molasses. The poor women, all of whom have a sweet tooth, and completely ignorant of the true value of sugar as they are of that of the splendid robes and furs, which will ultimately display their beauty in Central Park, New York, or on the winter drives of European capitals, gladly assent to the bargain. In lieu of pockets, satchels, and similar conveniences, the squaws tie the precious article up in small parcels in the corners of their blankets. The full wickedness of the trader's bargain oftentimes does not stop here. As he measures out his thickened treacle, according to frontier commercial usage when dealing with Indians, he inserts his three fingers into the shallow cup, which is the standard of measure, and only gives what little substance finds room in the small space, not already occupied in this ingenious but base fashion. While all this is going on, the Indian warriors or braves, as they call themselves, lounge about, as seemingly unconscious of what is going on as if they were so many bronze statues. They look disdainfully on all traffic, and would not degrade themselves by showing the slightest interest in matters of the shop, things only fit to be indulged in, they say, by the women.

An Indian trading-post may be generally characterized as the headquarters of a gang of robbers and swindlers, licensed by the United States Government to steal and cheat, the victims of these operations being those whom the Government professes to consider its wards, and whom it is under obligations to protect. It may be safely



Store of the Trading-Post.

asserted that, if any white man should attempt the same things among his own race, he would not long be out of State-prison. Stoical and unobserving as the red-men appear to be, they have long since learned that the white man looks on them in his commercial dealings as mere objects of plunder, and it is not strange that in their outbreaks their untutored minds should see no harm in driving off the white man's cattle from his ranch. If the victims of this retaliation were only and always the rascally traders, there would be no disposition among just-minded people to do aught but to clap the Indian on his back. But, unfortunately, the innocent have to pay generally for the misdeeds of the guilty. It is not our purpose or province to discuss in any way the Indian problem, which has for so many years perplexed the country; but this may be said in passing: if all the massacres, cruelty, and bloody barbarism of the Indian were put in one balance, and all the perfidy, heartless oppression, and villainy

of the white man in the other balance, the scale, if it inclined either way, would be in favor of the red-man.

The condition of the gentler sex is always a sure test of the progress of a race. All barbarians are the same in this respect. As a nation advances in wealth, refinement, and moral qualities, woman assumes her position as companion and equal. When she belongs to the lower races, she is literally a slave. In her domestic life, the Indian woman is the worker. She dresses the skins, which make the clothing and tent-covering, she tills the ground and gathers the crops, if there be any tillage of the earth, which is not common among the Western tribes, though it was among



Women Water-Carriers.

the tribes of the Eastern coast; she hews the wood, draws the water, cooks the meals, and performs all kinds of menial labor. When her tribe moves, she attends to the striking of the wigwam, and the packing up of all the property. She often carries, in addition to her household traps, an infant child, or papoose, as it is called, in a wicker basket, held to her back by a broad strap, that passes across the forehead. Thus burdened, she trudges on patiently in the rear of the cavalcade, driving on the cattle and mustang ponies in front of her. In the mean time, the braves, mounted on fleet horses, gallop along in ease and independence, as if their lordly minds were unvexed by a single earthly care.

As great as is the necessity of water, Indians seldom encamp directly on the bank of a stream. The result is, that the labor of the women, children, and dogs, of which animal the Indian always has many, is greatly enhanced, in their duty of supplying the lodges with the most important of the needs of life. The modes used are primitive in an extreme degree. Large earthen pots, which they manufacture with no inconsiderable skill, are triced on poles, the opposite ends of which are fastened to the sides of a dog, and thus the faithful animal is made of some practical use. The children walk in procession to and from the river, each carrying a jar. To the young women of the tribe are intrusted the horses, which, relieved for the time of their hopples, are driven in droves to drink. In performing this last task, many of the young squaws, mounting bareback, often race side by side, showing splendid equestrian skill, the literal personation of rival Amazons in living bronze.



Indian Women Bathing.

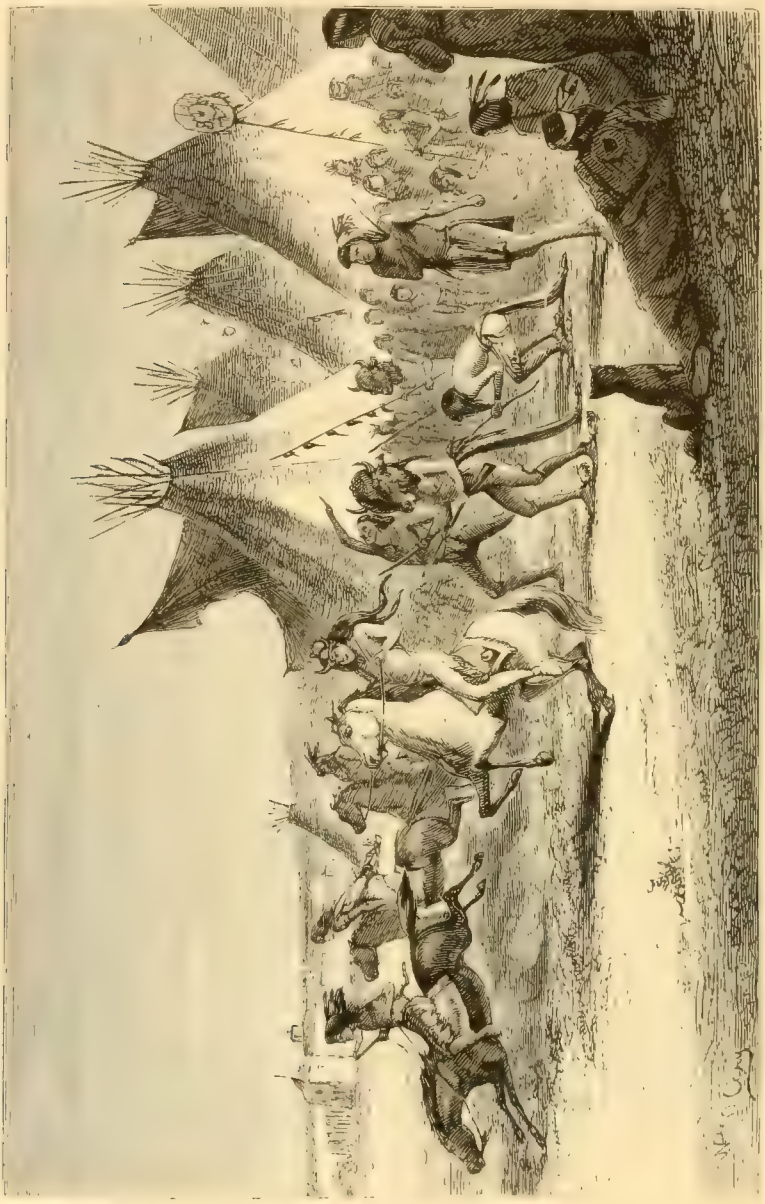
Though Indian women are frequently not a whit more cleanly than their lazy lords and masters, who seem to enjoy being overrun with vermin rather than otherwise, yet they are fond of the pleasures of bathing. It is under such circumstances that they make their most careful toilet. The scene often presents many novel feat-

ures. The mothers, while enjoying the bath, ornament the trees and shrubs about with their infants, which in their stiff bandages dangle from the branches, rocked to sleep by the wind. The old and middle-aged women are generally so deformed by hard labor and privation as to be precious specimens of human ugliness, and can scarcely be recognized as being of the same race as the lithe and graceful young squaws, who often present forms of the most exquisite beauty and symmetry—forms which, never having been subjected to the distortion of civilized dress, have grown in that perfect mold which has come down to us in the Greek sculpture. While the women are thus engaged in their aquatic sports, grave old men, warriors of established position, armed with bow and arrow, or rifle, keep guard on the bank not far away. And woe be to the curious young brave who would play the part of Peeping Tom! For he would certainly run the risk of getting a missile in a vulnerable if not vital portion of his person.

The old squaws, during the whole history of Indian warfare, have shown themselves to be more hard and merciless than even the warriors. In their treatment of prisoners they surpass the bloodiest contrivances of their lords, and the cruellest suggestions have come from these old hags, who, on account of their age and their superior ingenuity in torment, enjoy at such times a certain respect not usually accorded to their sex. Yet, as hard and callous as the Indian woman becomes by age and the suggestions of savage warfare, one observes among the younger ones at ordinary times exhibitions of the caressing love and tenderness which have been such a sweet phase of the feminine nature in all ages of the world. The love of the Indian mother for her children shows itself in much the same way as that of the civilized mother. She fondles and kisses and talks to her babe with the same devotion, and seems to find in the gratification of these maternal instincts an alleviation of the stern and harsh conditions of her life. Her pride in her offspring has often been commented on by visitors to Indian encampments. While the young urchins are practicing with the bow and arrow, the mothers often squat about, discussing the merits of the little archers. When any one makes an extraordinary shot, the mother will hug him in a transport of pleasure, just as the white woman will caress her child when he has done something which gives her peculiar pleasure.

Occasionally, in times of peace, a frontier fort, especially if bounties are about to be paid, is a very lively place. Then one may see thousands of lodges, and often five times as many Indians together, as they flock in from their reservation in great numbers. It is common, on such occasions, for the red-men to make a grand display before the pale-faces, and they enter into a sort of Indian carnival; for great joy and hilarity are abroad, in anticipation of the annual presents from the Great White Father. On these occasions the Indians will part with nearly everything—blankets, fur robes, and necessary clothing—to buy trinkets and many-colored paints for the exhibition. The wild and grotesque dresses of the savages on these occasions make a very striking picture. Headed by a sort of grand-marshal, and divided into organized parties, the gayly dressed savages bear aloft at their lance-heads their insignia,

consisting of tufts of party-colored threads, each one marking the division to which it belongs with the same precision that flags and banners do among civilized people. Every possible fantasy is indulged in—masks made of the enormous skin and beard



Frontier Fort.

of the buffalo-bull; plumes of the most brilliant feathers; togas of brilliantly stained and painted robes, thrown gracefully across the shoulders; flowing head-dresses, and waist-cloths that seem to be fashioned in shape and wearing after the sculptures of Karnac and Thebes. So these fantastically painted and costumed human serpents

dash and prance, leap and run, engage in mimic combats, now as individuals, now as parties, and give them up to the most wild and reckless enjoyment. Every possible idea of the queer and fantastic seems to be exhausted; yet, amid all this rollicking barbarism, one notices many an Indian Apollo, whose figure, drapery, and fine poses, would make him a fit subject for the chisel of a Phidias or a Canova.

It is singular that, among the North American Indians, there has never been discovered any trace of idol-worship, though in the tribes of Mexico, Central and Southern America idolatry in its most cruel and repulsive shapes existed. The fancy that the red Indians were the descendants of the ten lost tribes of Israel, which has found favor with many, got its strength, in part, from the fact that the Indians, like the Jews, never attempt to represent God in any visible form, or carry images about with them as charms. Yet, in spite of this, the Indians are among the most superstitious of races, and see in every strange event some movement from the supernatural world. They call God "The Great Spirit." Him they believe to be always good, and about his mercy they have no doubt. But they believe that it is constantly necessary to perform acts of severest penance and sacrifice to soften the malice and hate of the evil spirits which are constantly at work to make the lives of men miserable. So they trust in omens, and their "medicine-men," who act as their priests, are as absurd in their demands on the credulity of their ignorant followers as the "fetich"-men among the African negroes. The red-man believes he gets hints of the future through the flight of birds, the rustling of the leaves of trees, the tints of the setting sun, and a thousand other natural signs. They are given to sacrifices and self-punishments; and they never go out on any of their great animal hunts, or enter on the war-path, without going through a series of ablutions, fastings, and often laceration of the body. A striking example of this is in the annual sun-dance of the Sioux and some other tribes. The young men, who are about to become warriors and go on the war-path, drive sharply-pointed stakes into the ground, and impale themselves by the arms or through the fleshy parts of the chest. They then struggle, and writhe, and pull, till they have torn themselves loose, or else faint away, from pain and loss of blood.

Boys who have reached the age of fourteen, and desire to be admitted to the society of their elders, are obliged to give some test of their endurance. They prove their ability to go without food, to bear the roughest exposure, and to conceal physical pain with the utmost stoicism. One thing required of the candidate for manly honors is, that he shall adorn his head with the plume of an eagle that has lost its life without the shedding of its blood. To perform this difficult task the young man builds a decoy on some high peak known to be visited by the king of birds. Concealed in his hiding-place, he patiently awaits the coming of the eagle. While thus engaged he must eat no food; and instances are known where the young brave has found his hiding-place his grave. Even when successful, the young Indian's contest with the eagle is no trifling exploit, for he must seize the fierce bird with his unarmed hands, and strangle it without draw-

ing its blood, the talons and beak of the bird often inflicting the severest wounds on his captor.

So from first to last the Indian's life is one of severe self-mortification, with intervals of the greatest license. They are by nature moody and self-tormenting, and hence, perhaps, their fondness for drinking. Whisky arouses their energies, fires their imaginations, and takes them into dream-land—perhaps, indeed, turns them into fiends; and only in this drunken frenzy, or perhaps in the excitement of battle, is the Indian ever lifted out of his stoical calm. He meets death with firmness, for his life has been one of suffering and pain, and he has been taught that he will be made perfectly happy in the glorious hunting-grounds of the future state, where, armed with his trusty weapons, and accompanied by his faithful horse, he will enjoy eternal bliss.

The funeral, therefore, of the Indian partakes of these ideas. Instantly he dies his friends proceed to make such preparations as will be most meet to prepare the



Indian Funeral.

dead man for his long journey. He must not go empty-handed. If a warrior, he has his weapons, his insignia of rank, his trophies won in the chase and on the war-path; he must make a good appearance when he arrives in the Blessed Land.

When a sick warrior is past recovery, the young men start for the prairies, kill a buffalo-bull, and secure the hide. On this the dead body is laid, and with it the gun, bow, quiver of arrows, lance, tomahawk, and other implements of the departed brave. Choice food for a long journey is also placed in the hide, and then all are

carefully rolled together and secured with strips of raw-hide. A few hours of sunshine dries up the hide, and its contents then appear to be cased in sheet-iron. Poles are now brought and holes are dug, and, when everything is in readiness, the last grand act in the impressive ceremony is performed. The eldest son—if the departed



Indian Widow at her Husband's Grave.

warrior has left children—or the nearest relative brings a wild horse forward, one that has never been backed by man, and with a single blow of his tomahawk fells the animal alongside of the corpse. Thus the dead brave has a steed to carry him in state to the happy hunting-grounds.

The body is now erected on poles and covered with a purple or scarlet blanket to drive off the evil spirits, the poles themselves being hung with presents of food or trinkets. The women cut their hair close to their heads as a sign of sorrow and mourning, and, forming circles in the background, beat their bosoms and weep scalding tears. The warriors, on the other hand, sit around under the dead body, and recount in a strain of wild poetry the mighty deeds of the dead. They then puncture the fleshy parts of the thighs with a lance, that they may shed tears of blood, for real tears would be unmanly, and therefore not befitting an Indian brave.

The belief in the presence of the spirits hovering about the place of sepulture is natural to the Indian mind, and leads to many curious customs. Widows and mothers who have lost their children have been known to travel one and two hundred miles through swamp and forest to visit the graves of those whom they have lost. Reach-

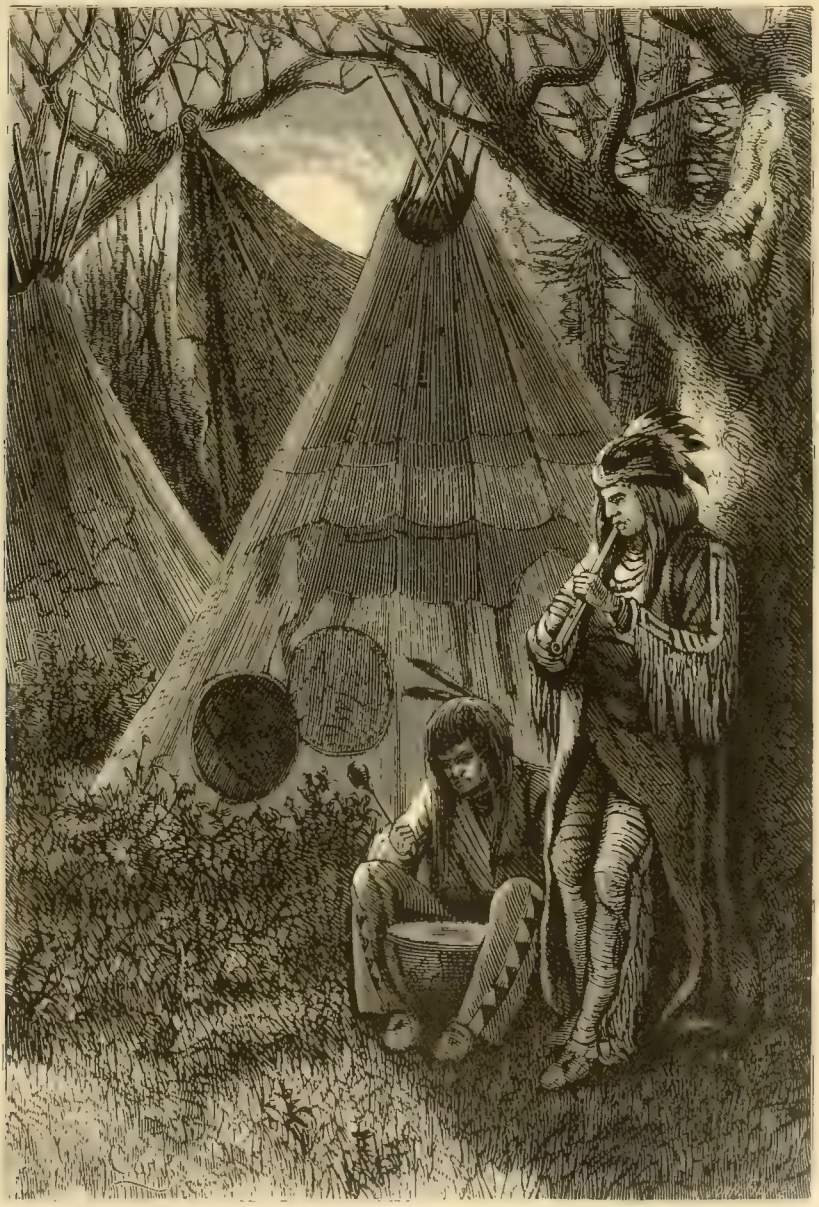
ing these sacred resting-places, possibly after a long residence elsewhere, they find little left but decaying bones. These repulsive relics are carefully gathered up by the hands of affection. If a husband's remains, the widow will address the vacant skull in terms of affection, and repeat long stories of important events that have recently occurred in the history of the tribe. If it is a mother, with the remains of an infant child, she will take the little skull in her hands and press it to her bosom, and even attempt to put delicate food in the gumless jaws. All the terms and arts of endearment which could spring from the affection of wife and mother are lavished on the senseless bones. At the end of these unusual rites the precious relics are carefully packed in a bundle, taken to the tribe's new resting-place, and buried.

The greatest crime against Indian notions of right and wrong is in the desecration of the grave. When the red-men dispose of their lands and move away, they linger with the most touching grief over the burial-places of the tribe. In the eloquent speeches so often made by their orators, the most touching plea made against removal to another reservation is their reluctance to go away from the resting-places of their beloved ones. As the Indians bury literally above-ground, they strew these places with the property of the dead. It is common on the Plains to find Indian burying-grounds, the center and neighborhood of which are covered with blankets, domestic utensils, guns, bows, arrows, etc. Even hostile tribes at war with each other always respect these memorials of death and the affection of the living. When these properties of the dead have in course of time disappeared, it is believed that they have been inhaled and literally passed into another world. To destroy or appropriate them is to deprive the departed of their wealth, and create sorrow in the spirit-land, and is thus regarded as the most dreadful of all crimes.

Many of the bloodiest of the wars of the frontier have been caused by the thoughtless acts of the whites in desecrating these sacred places. Curiosity has prompted many a white intruder to break down the resting-poles of these prairie biers, and rip open the buffalo-skin coffin, to see if there is not something more valuable than decaying bones. The trinkets have been taken away as curious relics, and the utensils laid aside for use. An authentic story is told of a half-starved Indian who applied at a trapper's hut for food. While being served, the hungry red-man discovered that the smoking platter in which the viands were served was a dish stolen from the grave of his brother. The Indian's eyes fairly glared in their sockets with horror, and, being weak, and without weapons to avenge the deadly though innocent outrage, he swiftly fled from the presence of one guilty of so great a crime, with his hunger unsatiated.

Let us turn from these funereal customs to some of the more cheerful aspects of Indian life. Though the career of the Indian woman after marriage is so hard and cheerless, the days of youth are not without the sentiment and imagination which make the passion of love such a powerful influence in civilized life. So we find this most universal of all feelings taking its accustomed place in the social side of Indian character. The fair prospect of domestic happiness is soon blasted by austere notions

of the warrior's dignity and of the woman's inferior place; but the softness of manner which would bring the man of mature age into contempt is pardoned in the youth.



Indian Lovers.

The Indian lover, in the interchange of sentiments of attachment with the dusky maid on whom his heart is set, has no language, except that suggested by the natural objects around him. But his suit is none the less ardent and devoted. He may not address the beloved one with the profuse and reckless promises so familiar to the

facile lips of the frequenter of drawing-rooms, but his pleas are often full of a touching and artless poetry. The legends of the Indian tribes are brightened and softened by many a love-romance, not less interesting than those of civilized people, and their history has been, in many cases, colored and shaped by the potent passion. Such an incident as happened only a few years ago has often been paralleled by similar cases in Indian life. A young man fell in love with a girl of a friendly tribe, but, before the nuptials could be celebrated, war broke out between the two tribes. In the delays of an attack, the Indian lover fastened a piece of birch-bark, covered with hieroglyphics, depicting his passion and his wishes, to an arrow, and shot it into the hostile camp. The message was evidently expected, for it fell into the right hands, and that night the young lovers met, and escaped together to a tribe where their amorous hopes were not disturbed by war's alarms.

The symbols used by the Indian lover are such as would be recognized anywhere. The heart is a conspicuous object, as typifying the affections. The more delicate sentiments are represented by birds, courage by the eagle, and anger and jealousy by quaint caricatures of the ugly head of the bison. Our artist has given a literal delineation of an Indian serenade. The red lover, on a bright moonlight night, charms the ears and heart of his mistress with the muffled notes of the drum and the liquid notes of the reed—such a pipe as the god Pan is feigned by the Greek poets to have made. It is plaintive music, for Indian life at best is more or less sad, and one might almost fancy, in the tell-tale notes, the prophecy of a hopeless future. But the custom is deeply interesting, as showing the universal reign of sentiment. Love, for the time being, subdues all fiercer passions, softens the savage heart, and stirs the pulses of the simple children of the forest and plain, as it does the emotions of those who wear silk and broadcloth.

It is in the pursuit of the game on which the Indian depends for subsistence that we see many of the most interesting phases of his life and character. He acquires, by long practice, the most accurate knowledge of the habits of the animals that range the woods and plains, and of the fishes that swim in the rivers and lakes; and his senses, trained to the finest acuteness, detect meanings in sounds and appearances which, to the white man's coarser perceptions, have no significance.

Let us go with the Indian on an elk-hunting excursion, when he pursues the crafty method which is known as snapping the twig. It is a still-hunt throughout, and requires great patience and skill to baffle the alertness and quick resources of this animal. The elk, while not as swift as some other animals, has the keenest scent and the finest hearing. To hunt it successfully when resting through the day, with every faculty wide awake, is a test of the hunter's craft, which the Indians along the whole line from Canada to the Pacific feel justly worthy of a warrior's skill. The habits of the elk are taken advantage of to find a trail made by him in going to his regular drinking-place. The Indian hunters, one armed with a rifle, the other with a dry twig, know that the elk spends the hours of daylight somewhere along this trail, which may be half a mile long. So keen are the ears of the elk, that the



Hunting the Elk.

pursuers always have to approach the trail at a right angle with such precaution that not a leaf is stirred by their footsteps. Coming to the trail they examine the foot-prints, and no printed book is more plain in its story to the civilized man than these natural signs to the children of the forest. For example, the hunters discover that the elk is between the spot of the trail they have reached and the water it drinks. Moving cautiously away at right angles, they make an immense circuit around until they reach another spot in the trail. The sign now is that the elk lies between the first and last mentioned places. Again the Indians make another immense circuit, and strike the trail this time near enough to make a gunshot calculation of the animal's resting place amid the high grass and undergrowth. Approaching the trail, the third, possibly the fourth, fifth, or sixth time, this slow process at last rewards them with a sight of the elk's immense antlers peeping from above the ambush of its forest lair. The Indian now levels his gun, while his comrade snaps the dry twig over his knee. The great elk springs to his forelegs and glares around. The sound is not necessarily a suspicious one, for it might have been caused by another elk or by a dry limb falling. For a moment the noble beast speculates, ready for flight, but

the hesitation is fatal. The rifle cracks, and the animal falls dead in his track, a victim to the superior wiles of man.

The Northern Indians have a picturesque fashion of hunting the elk in masquerade, something like that which the Indians of the Plains use in pursuing the buffalo. The skin of an elk is carefully preserved, with the head and horns left intact. Two hunters pass this heavy, unwieldy mass over their heads and shoulders, the skull and horns often weighing some eighty pounds. Thus disguised, and armed only with



Indians Elk-hunting in Masquerade.

bows and arrows, they hie straightway to some previously discovered feeding-ground, where the elk in a drove are browsing on the sage-brush or on the limbs of the trees. So perfectly do the cunning red-men carry out their masquerade that the sharp wits of their victims are completely beguiled. Fearless of the intruders they go on with their cropping, unconscious of danger. A good point of vantage being gained, it is not unseldom that the hunters slay two or three fine animals before they are alarmed, for the deadly arrows do their work noiselessly. At last the herd take the alarm, and with a cry of terror bound away, but not before the active hunters, who have



Indians Buffalo-hunting in Masquerade.

now thrown off their disguise, fire one or two deadly shots more. Such are the novel contests called forth by the hunting-craft of the woods.

The buffalo, or bison, formerly covered the Plains in countless herds. But the advent of the railway across the continent and the encroachments of civilization have already confined this noble animal within narrower limits, and the spectacle of herds reaching from horizon to horizon can now only be seen across the borders in British America, where the march of the white man, with his institutions and habits, has been less swift. There is something very grand in the appearance of these huge herds of shaggy creatures, these vast supplies of food not only for the Indians but for all the wild beasts of the field and the vultures of the air. Following the buffalo-herd at a respectful distance, and ever ready to pounce on a weakly or wounded animal, may be always seen the large white wolf. This is one of the most rapacious and cruel of all American animals of prey. While feeding, the buffaloes keep the cows and young in the center, and then, as pickets and skirmishers, have their strongest and most powerful bulls to fight off the ever-ready enemies, among which is the alert and prowling wolf.

The Indians are great students of Nature, the one book which it is their province to read, and they study the habits of all animals with the shrewdest attention. A favorite mode of entrapping the buffalo within reach of their arrows is to conceal their persons in the skin of the white wolf. In this masquerade they make their appearance on the Plains. Perfectly imitating the actions of the animals which they represent, they travel on their hands and knees for miles if necessary, so as to approach the herd and its fierce guardians without exciting suspicion, for the buffaloes are such good judges of the habits of the wolf, that the slightest deviation would defeat the red hunter's object. As a rule the hunter succeeds. It is a grand sight to see the old veteran bisons stand on guard, jealously watching these disguised enemies, rolling their red eyes in fierce wrath, and pawing up great clods of the prairie. When the Indians reach shooting-distance, they suddenly rise up on their knees and seldom fail to drive their keen arrows through and through the tough and



Hunting the Buffalo on Foot.

shaggy sides of their game. As the herd takes the alarm, the Indians drop their wolf-skins and generally succeed in getting a number of successful shots before the frightened animals get out of reach of a foe more terrible than even the dreaded wolf.

This method is pursued only when the buffaloes are few in numbers, and wary from repeated hunts. Occasionally great herds will move toward an Indian village, and then the red hunters slay with the blood-thirstiness of tigers. Possibly, some stray animals may be surprised within sight of a lodge. On such occasions, young warriors show their courage and fleetness by pursuing the animals on foot. The scene is spirited, and, if it could be transferred to the painter's canvas, we should have a naked Apollo, graceful in action, perfect in form, to contrast with the huge and terrible-looking game.

What the buffalo is to the Indian of the Plains, the salmon is to the tribes that live on the Columbia River and its tributaries. These streams are remarkable for the plentifulness of their finny inhabitants. Those who have never witnessed the extraordinary quantity of fish which, at certain seasons of the year, crowd the wa-



Catching Salmon in the Columbia River.

ters of some of the rivers of our Pacific coast, can not understand their abundance through any mere description. The salmon enter the mouth of the Columbia in May, and work their way up the stream, in immense shoals, for a distance of twelve

hundred miles, often being found in September at the very head-waters of the river. The young fry pass to the sea in October, when they are nearly as large as herrings. Different species of salmon have their different localities, and the Indians, by a casual glance, will tell correctly in what particular part of the interior waters the salmon were spawned. The same thing is also true of shad. A very little observation will enable any intelligent person to select those from the Potomac, the Delaware, the Hudson, or the Connecticut Rivers. Each stream stamps its local character on its finny inhabitants—the result of a wonderful law of Nature. The salmon makes the principal food for thousands of Indians inhabiting the northern portion of our continent, besides affording a great supply for all the white people of Oregon and California, and furnishing immense quantities for exportation to the fish-markets of New York and the East. The immense salmon-canning establishments on the Columbia have become, too, an important branch of industry, employing thousands of people.

To the Indians of the Northwest the salmon has ever been looked on as a direct blessing from the Great Spirit, associated in their simple minds with the buffalo-herds that throng the Plains. To them the land and sea were crowded with the evidences of the goodness of Providence. Up to twenty-five years ago, it is probable that few white men on the Pacific coast, out of respect to the traditions of the red-men, and fear of provoking their enmity, had ever taken a salmon from its native waters. While the Indians would not let the white men fish at all, they themselves would not fish for some days after the first appearance of the fish in the river, lest they should show an undignified haste in appropriating the blessing. In their primitive state, the Indians would never eat a salmon without first taking out its heart, which they carefully kept, till they had a chance to burn it. They believe that, if the heart, which is considered sacred, were eaten by a dog, or otherwise defiled, the fish would never return to the river, to comfort and bless them. In the fishing-season, a favorite place for securing the coveted game is at the foot of some gentle fall or other obstruction. Here the salmon, interrupted in their progress inland, often pile on one another, till those on the surface are crowded on the land. With a simple hand-net and a spear the Indians will, in a few hours, load down their canoes with the finest fish. The Oregon Indians have been so corrupted by their contact with the whites that they have lost respect for their traditions, some of which were of a gentle and refining nature. Their regard for the salmon, the reverence in which they held its appearance, their days of abstinence from its consumption, were all good and healthful traits. But now, those of the tribes who hold any intercourse with the white people have lost regard for everything but gain. They have become so wickedly wasteful as to kill the noble fish recklessly, and often the whole air for miles, in the vicinity of the river, is tainted with the decaying flesh. But of this something has already been said before in an earlier chapter.

The Northern Indians, who live in regions frequented by the moose, in that vast reach of wilderness which, from the Mississippi River to the Pacific Ocean, stretches along the British border, find in this splendid game a substitute for the buffalo,

though it has never existed in numbers at all equal. Living in a region where for at least half the year the earth is covered with snow, the moose finds himself persecuted by wild beasts and wilder men without ceasing. Possibly within the next quarter of a century this splendid animal will have ceased to exist within the present boundaries of the United States—a fate which will probably be that of the elk and bison also, unless some stringent means are taken to check their wholesale slaughter.

Indians take advantage of the cold weather to drive the animal into the snow-drifts, where it becomes a comparatively easy capture. So long as the earth is



Killing the Snow-bound Moose.

uncovered except by vegetation, the moose roams tolerably free from his many foes, for he possesses, in an eminent degree, the wonderful scent which belongs to the deer family, and so he smells danger from afar. Upon the smooth plain a very ostrich in speed; among the huge tangled wrecks in the forest, left by the tornado and the storm, he moves with equal ease, his spreading horns brushing aside obtrusive limbs, and his long legs and overreaching steps finding no obstruction to his progress in the prostrated trunks of the giant trees of the northern wilds. But, when snow lies deep on the frozen ground, the great animal finds his heavy body and long legs destructive of all speed. When undisturbed, he paws away the snow, or shovels it

aside with his massive horns, and finds in the lichens and mosses that keep green and tender beneath the snow, abundant food. There is no reason for his making long journeys, and the difficulties of travel do not prevent his getting food. But the position is altered if he scents the pursuing hunter. Conscious that he is taken at a disadvantage, he stands trembling and half paralyzed at the hopeless struggle which is before him.

The hunter, guided by infallible signs in his search for game, gradually approaches. He walks over the lightly-packed snow as if walking on the solid ground. Where the drift lies with its trembling surface, as if of a mass of eider-down, he finds firm footing, as if borne in the air by some invisible power. But there is no miracle in this swift, easy tramp over the unpacked snow. On his feet are snow-shoes, resembling in shape a boy's kite. The frame-work is made of light, strong wood, of an oval shape, and about three feet in length. Stretched on this frame is a delicate wicker-work, made of strips of the moose-deer's hide. This ingenious contrivance is bound to the foot by thongs around the ankle and instep, and, thus shod, the hunter traverses the deepest snow-drifts without the slightest difficulty.

The Indian hunter thus makes swift headway as he slides nimbly over the snow, while the wretched moose plunges and writhes in the treacherous element. In his hand the red-man carries a spear with a shaft eight or ten feet long. The animal has pawed up around him an extensive clearing, and piled the snow around his feeding-ground, perhaps as a breastwork. The Indian sees his quarry and yells fiercely to alarm the moose, already trembling with a foretaste of his coming fate. Instantly the creature bounds over the barrier, and in a moment is struggling and stumbling knee-deep in the snow. For a short distance perhaps he makes great headway. But every successive plunge makes him more and more weak, and soon he is involved in a cloud of reeking perspiration. Conscious that the fatal moment has arrived, the despairing moose comes to bay.

The hunter's work is now mainly accomplished, and the passage at thrust and defense is of short duration. For a few moments the moose parries the fatal lance with his antlers. His large, expressive eyes, shining with exhaustion and terror, are full of a veritable human passion, while the hair rises on his neck, and he seems changed into a perfect fury. But every attempt at attack or defense sinks the weary animal deeper and deeper in the snow, and at last, helpless and exhausted, he dies from a fatal thrust. His most terrible weapon, his sharp hoofs, which on bare ground he could use with incredible agility and effect, are disabled, and he falls an easy prey. There is but little glory accorded among the Indians to the successful snow-shoe hunter. True, there is some wood-craft needed in tracing the moose to his retreat, but the lack of danger to the pursuer in the final conflict makes the feat commonplace. It is simply work performed to procure food in the struggle to sustain a hard and profitless life.

The Indian in his continual wanderings over the great plains and mountains of the West is subject to many mishaps, accidents by field and flood, which he either

meets with stoical calmness or averts by ingenuity and command of resources. As an example of this may be instanced his method of dealing with rattlesnake-bites. The rattlesnake is one of the most venomous serpents in the world, and exists in great numbers scattered over the plains and mountains of the far West, and, if there were no means of curing its attacks, would be a most dangerous pest to the red nomads. But the Indian long since discovered a specific remedy, and is always prepared to meet the danger. The observant traveler knows that, wherever the rattlesnake abounds, there is sure to be growing in large quantities a common-looking plant denominated black-root. This precious root is always kept in the Indian's pouch, for by its wonder-working effects he becomes indifferent to the fangs of the rattlesnake. The danger to the Indian of the plains is less to himself than to his horse, without which this Centaur is only half a man. The horse has an instinctive tendency to examine closely anything that attracts its attention along the road it is traveling. An old horse learns from experience, and will carefully avoid what recalls danger. For this reason the veteran shows signs of nervousness at the strong, aromatic scent peculiar to this snake. But the young horse will thrust his nose toward what surprises him, and will follow the action with a strong puff of wind through his nostrils. The rattlesnake, always on the alert, offended by this apparent attack, darts its fangs into the delicate membranes of the horse's nose. The animal starts back as if conscious of some disaster. In a few minutes its sight becomes glazed, it staggers from side to side, and, if not cured, would soon die. The Indian, with his black-root, treats the matter with cool indifference. Hoppling the wounded animal, he throws it to the earth; he then builds a fire and makes a strong decoction of the black-root, bathes the wound, and pours the remainder down the horse's throat. In a short time the otherwise deadly poison is neutralized, the animal recovers its strength and spirits, and goes on its way as if nothing had occurred.

The ingenuity of the Indian in the use of the very simple tools which he has at his disposal is admirable. This is noticeable in the neatness and dispatch with which he butchers the buffalo and other game. While savage and civilized peoples agree as to what are the best parts for food of the bovine animals, there must be a great difference in the manner of cutting them up, preparatory to their being consigned to the pot and the spit. Our butchers, by the aid of machinery, hoist the dead body of the ox with heels in the air, and proceed to take off the hide by making the first incision under the belly. After the skin is removed, the carcass is split in twain, and the different parts of the meat disjointed.

Now, the Indian kills a buffalo-bull, whose enormous weight is equal to that of a stalled ox. He has no machinery for hoisting the body into the air, no tools except his light hatchet and frail knife. Yet he does his work with scientific ease and accuracy, and from time immemorial has probably cut up the carcasses of the monsters of the plains with a neatness and skill that would call out the admiration of the most expert butcher. From the peculiar structure of the buffalo, and the liberal growth of hair about the shoulders and fore-legs, the chances are about equal that it

will die resting on his chest instead of on his side. When this is not the case, the Indian, unaided, but with much exertion, can bring the body to an upright condition. He then proceeds to cut it up, which he does by opening the skin down the back, and stripping it off, extending it on the ground in such a manner that it assumes the appearance of a satin covering or blanket on which the carcass is exposed. The knife and hatchet are used with such skill that in a few moments the choicest portions are neatly disjointed and laid aside. This done, the Indian reverently turns up the corners of the hide over the refuse portions, and leaves them to be the prey of the buzzards and the wolves, who are not long in discovering the toothsome tidbits thus fortunately left for them.

In all the exigencies of their savage life, the Indians show similar skill and power of adaptation, and accomplish great results with small means. The red-man of America may be safely pitted against any other barbarian of the world for display of brains, ingenuity, courage, and fortitude, both of mind and body, as seen in his wild state. But, under the effect of association with the white man, it is to be feared that he has lost most of his savage virtues, while he has absorbed the worst vices of the higher race.



Columbia Mountains, Nevada.

SCENES IN NEVADA AND OREGON.

Features of Nevada scenery—The Sierras and their forests—Characteristics of the mountains—Valley of the Truckee River—The Sierras of Nevada—The desolation of the plains—Humboldt Mountains—The beauty and fertility of Oregon—A voyage up the Columbia River—Castle Rock and Cape Horn—The Cascades and Dalles City—Salmon Falls.

NEVADA, in common with the entire region lying between the Sierras and the Rocky Mountains, is an elevated region, having a general height of four thousand feet above the sea. On the western borders of it lies the remarkable range of snow-clad mountains so well denoted by the name, the Sierra Nevadas, while crossing the State in nearly parallel lines are other ranges whose peaks vary in height from five to twelve thousand feet. The sides of these mountains are everywhere cut by deep ravines or cañons, most of them running from crest to base, and usually at right angles with the general direction. The cañons vary greatly in width, and some of them have rivers flowing through them, while others are entirely destitute of water. The tops of the divides between the lateral cañons are sharp and ragged, the bare and splintered rocks standing often far above the crest of the ridge, and looking in the distance like ranks of giants in skirmish-line, who had been transformed to stone by some magic force.

The valleys sometimes extend more than one hundred miles, uninterrupted except by an occasional butte or spur; and frequently, when the mountains disappear or contract, unite with other valleys, or expand into broad plains or basins, some of which are unobstructed, while others are dotted with buttes, or covered with groups of rugged hills.

Nevada, though it has fewer inhabitants than any other State, is the third in area, Texas and California alone surpassing it. Its extreme length is four hundred and eighty-five miles, and its extreme breadth three hundred and twenty miles, though in the south it contracts to a point. It has on the north Oregon and Idaho, on the east Utah and Arizona, from the latter of which it is partly separated by the great Colorado River; and on the west and southwestern borders lies the State of California.

Nevada probably ranks first among the silver-mining States of the country, though Colorado has of recent years seriously contested its precedence. The great Comstock lode, which has produced altogether, it is said, nearly three hundred millions of dollars, was for a long time the richest mine in the world, though now its production has greatly fallen off. Virginia City, the capital of Nevada, which is reached from Reno, on the Pacific Railway, by the Virginia and Truckee road, is still a great mining town, though its swift rush of prosperity has been somewhat checked for the last five years. It is built over the Comstock lode, which extends for some four miles, and is on the side of Mount Davidson, about half-way between the base and the summit. This unique town, besides its very curious natural features, possesses that remarkable engineering work the Sutro Tunnel, which pierces the base of the Comstock lode, drains the mountain of its water, and furnishes a ready means of transporting the ore from the mines.

The ore is worked in two ways, by wet and by dry crushing, the former being by far the more profitable, but unfortunately in many cases less practicable, than the latter. Still, silver-mining, even yet, is experimental, and the application of science to the solution of its problems has not yet achieved the great results we have reason to expect in the future, from the improvement already manifested. It appears that at only a few of the districts do they find ore that can be reduced by what is known as the wet process, which can be carried on at half the expense of the dry crushing, with roasting process. Moreover, the expense for roasting by the old reverberatory furnace often runs as high as twenty-two dollars a ton, while the improved method of roasting, to say nothing of the diminished first cost of the furnaces, has lessened this expense to something like six or seven dollars a ton, which realizes from each ton of ore this difference in cost, and also enables mining companies to work cheaper ores, that otherwise must be thrown into the waste-dumps. When the mining-camps were continually changing, in virtue of every story of a new and rich discovery, the popular mind was in a continual fever, and the gambling spirit unsettled all the ties of social order. But we can not now linger longer on this feature of Nevada life, but must return to a survey of the natural scenery of the State.

In many parts of the Sierras are found noble growths of pine forest, though in the ranges which cross the State the mountain-sides are, for the most part, only covered with a scanty growth of bunch-grass, and with patches of scrubby trees. Mr. W. H. Rideing, who has written much of the West, gives us some vivid glimpses of the forests of the Sierras. He says:

"Down the eastern slope of the mountains, leading to the Carson River, flumes twenty and thirty miles long are carried over valleys and ravines on high trestle-work bridges, and the wood is floated through them over another stage of its journey toward the mines.

"One morning as I was riding through the Truckee Cañon, a great wave and a cloud of spray leaped from the river into the air some distance in front of me. I went a few paces farther, when, by the merest chance, my eye caught what was intended to be a sign—the lid of a baking-powder box tacked to a pine-stump, and inscribed with dubious letters, 'Look out for the logs!' In which direction the logs were to be looked out for was not intimated, and I paused a moment in uncertainty as to whether security depended on my standing still or advancing. Suddenly my mule shied round, and a tremendous pine-log, eighty or one hundred feet long and about five feet in diameter, shot down the almost perpendicular wall of the cañon into the river, raising another wave and an avalanche of spray.

"This was to me a new phase of the lumber industry. A wide, strong, V-shaped trough, bound with ribbons of iron which had been worn to a silvery brightness by the friction, was laid down the precipice; and out of sight on the plateau above some men were felling the trees, which they conveyed to the river in the expeditious manner aforesaid.

"On another morning a runaway mule caused us a wild chase over a range of hills wholly cleared of trees and dotted with forlorn cabins, which had been successively abandoned as the lumbermen had moved from camp to camp. While the Comstock lode continues to yield its enormous treasure, the denudation will continue, and whoever knows how beautiful the shores of Lake Tahoe are must regret that they have not been reserved, like the Yellowstone and Yosemite Valleys, as a national park.

"Seen from the deck of the steamboat and from the summits of the surrounding mountains, the banks of the lake are a prevailing brown. At these distances, the luxuriance of the vegetation can not be seen; but the vegetation is luxuriant, and, except on a few sterile spots, the willow, oak, cotton-wood, pine, fir, and spruce, multiply every shade of greenness. Then there are two shrubs which occur in company, and which remind us of an erubescent country-girl and a pallid old man—the *manzanita*, with its bunches of ruby berries, thick, olive, smooth-surfaced leaves, and polished, red-brown stalk; and the white-thorn that clings to the earth in ghostly leaves and branches, and that presents an obstacle in its toughness quite out of proportion to its size. The oaks are small and pliant, and are not numerous. Sometimes, when the wall of the lake is a perpendicular cliff, as at Emerald Bay, and a level margin of swamp extends from the rock to the water, a soft undergrowth is

found, and grasses, vines, and shrubs, spring out of the oozy soil with a profuseness not usual in so cold a zone as that of the Sierras."

For four hundred miles the Sierras stretch broad and high. The hill-forms that mark the base of the eastern slope are round or sweep in long ridges, broken by the



Summits of the Sierras.

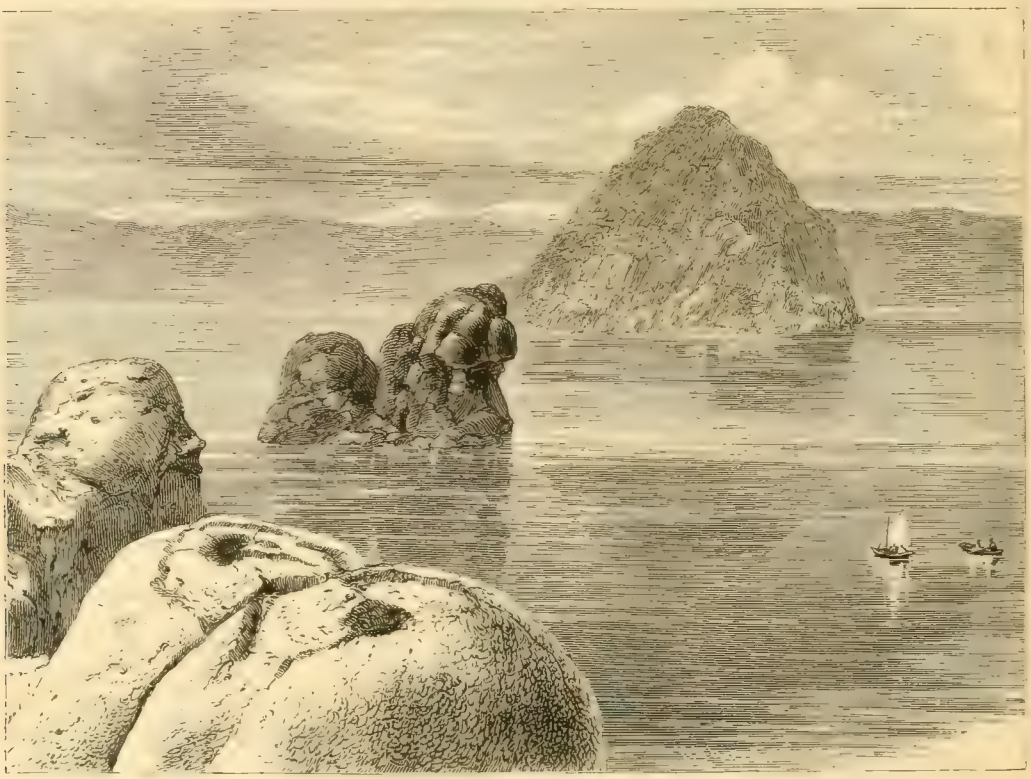
river-cañons. Above this belt undulates another stretch of hills and forests, dotted with a chain of mining towns, ranches, and vineyards. Then come the swelling middle heights of the Sierras, a broad, billowy plateau, cut by sharp, sudden cañons and sweeping up in grand forests of spruce, fir, and pine to the feet of the summit-peak, where an eternal barrier of snow sternly forbids further advance of vegetation. The forest gets thin and broken, showing only a few Alpine firs, black shafts cowering in sheltered slopes or clinging to the storm-swept faces of the rocks. Higher up a few gnarled forms are passed, and beyond this the silent white peaks lifting in sublime loneliness. Volcanic domes and cones, and granite crags of every regular and irregular shape, crown these summits, some of them so beautiful as to make one think they must have been carved by the chisel of the sculptor. The upper Alpine gorges are wide and open, leading into amphitheatres whose walls are either rock or drifts of never-melting snow packed and beaten into icy hardness. The sculpture of the summit is evidently the work of that wonderful carver, the ice-glacier, and, though in the past the work of this great force was much more powerful in extent and character, yet the frequent avalanches of to-day and the freshly-scored mountain-flanks are constant suggestions of the past. The Swiss Alps have long been regarded as the most attractive and beautiful mountains of the world, but those familiar with the deep recesses of the Sierras find here all the beauties and marvels of Alpine scenery existing in even greater degree.

The noble forest-covering of the flanks of the Sierras is unequaled, perhaps, certainly not surpassed, in any mountains of the world. The tall, straight shafts of pine and spruce rise to the height of those splendid trees which make the forests of Oregon and Washington Territory so remarkable, and the dense mantle of deep green lends great beauty to the slopes which shoot up above in snowy pinnacles. The traveler by rail sees but little of the noblest scenery of the Sierras, as the vision is closed in by the snow-sheds, which extend for so many miles. To enjoy it we must be prepared to undergo hardship and fatigue, camping out amid the deep forests, or on the mountain-sides, and prepared for all the rough accidents of frontier life.

We find among the cañons, and at the base of the Sierras, or flowing down the flanks of the pine-covered slopes, charming little streams, even a few rivers of considerable size, their clear waters brawling over a pebbly or, it may be, a bowlder-strewed bottom, and alive with fine trout, of a size and gameness which would make the heart of the Eastern angler dance with joy. Among these beautiful streams is the Truckee River, which flows through the well-named Pleasant Valley. Such bright mountain-rivers lend additional beauty to the scenery of the middle and lower slopes of the Sierras, which combine so many varied beauties as almost to justify the boast of many of the enthusiastic men of the Pacific slope, who are accustomed to say, with some degree of irreverence, that, after the Almighty had made all the other mountains in the world, he made the Sierra Nevadas, as the final result of all his experiments in creating what is grand and beautiful.

Leaving the Sierras, let us take a hasty survey of some of the other features of

Nevada. Most of the surface-water of the State is collected in lakes, none of them of great size, most of them quite shallow, and all of them picturesque in their surroundings. The largest that lie wholly within the State are Pyramid Lake, formed by the waters of the Truckee River; and Humboldt, Walker, Carson, and Franklin Lakes, formed respectively by the waters of the rivers bearing their names.



Pyramid Lake, Nevada.

Pyramid Lake, which is the largest, gets its name from a pyramidal rock near its center, rising six hundred feet above the surface of the water. It is of considerable depth, and is entirely surrounded by precipitous mountains, two or three thousand feet high. It abounds in large trout. The scenery all around is very grand, befitting a State which may be considered so remarkable for its landscape effects, specially in the grandeur of its mountain-views. What is called the Great Basin of Nevada is not a shallow depression, or even a broad valley, but a succession of valleys, separated by parallel ranges running north and south. It is only a basin, in the sense of being lower than the Rocky Mountains and the Sierras, whose huge masses form its borders. Of the mountain-ranges which traverse the general valley, the Humboldt chain may be taken as a good example.

After leaving the Truckee River, which flows near the borders of California and

Nevada, the traveler, journeying in a northeasterly direction, crosses an arid desert, which is desolate in the extreme. He may stop to examine the hot springs, scattered throughout the waste, but he will probably hurry till he reaches a point where the distant view of the Humboldt Mountains cheers his heart with the thought that his goal is nearly reached. The mountains look charming in their veil of azure mist, but we must not be content with this. Well does it repay the effort to climb their rocky summits, lunch beside their sparkling rivulets, to spend a night around some blazing camp-fire in a mountain ravine, to rouse the echoes of the glens, or the fiendish yells of coyotes by the ringing peal of the rifle, or the trolling of a joyous song.



Star Peak, Nevada.

Let our reader fancy himself on the divide from which the view of Star Peak, which is given in our illustration, was taken. He will then be seven thousand feet high. To the left of the picture is seen a great bluff of limestone, a portion of a grand natural wall, at some points six hundred feet in height. This is of great

length, and often steep and inaccessible. The small trees are junipers and mountain mahogany, and the bushes on the hill-sides are the ever-present sage-brush. Although Star Peak, a mountain 9,960 feet above the sea, which looms so grandly in the distance, appears quite near, it is in fact about ten miles from us. But, owing to the exquisite clearness of the atmosphere, even the little cañons and ravines which furrow its sides may be distinctly discerned. On the northern side of this mountain exist caves of great interest and extent.

As we look back, the view of the desert and the adjoining mountain-ranges is peculiarly beautiful. One barely perceives the roads crossing the plains and winding among the distant hills, but columns of dust rise in the air a thousand feet high



Lake in the Humboldt Range, Nevada.

from passing teams, which look like mere motes. The ashy hue of the landscape is relieved by the dazzling whiteness of the alkali plain gleaming in the sunlight like a bed of snow.

Mr. Bowles, in his animated narrative of his ride "Across the Continent," speaks eloquently of the scenery of Nevada. "Mountains are always beautiful, and here they are ever in sight, wearing every variety of shape, and even in their hard and bare surfaces presenting many a fascination of form—running up into sharp peaks; rising up and rounding out into innumerable fat *mammillas*, exquisitely shaped; sloping down into faint foot-hills, and mingling with the plain to which they are all destined; and now and then offering the silvery streak of snow which is the sign of water for man and the promise of grass for ox. Add to the mountains the clear,



Sculptured Cañon, Humboldt Range, Nevada.

pure, rare atmosphere, bringing remote objects near, giving new size and distinctness to moon and stars, offering sunsets and sunrises of indescribable richness and reach of color, and accompanied with cloudless skies, and a south wind refreshing at all times, and cool and exhilarating even in the afternoon and evening, and you have large compensations for the lack of vegetation and color in the landscape."

The Humboldt Range presents many of the most interesting features of Nevada scenery. There are scattered through it pretty little lakes, encircled by high peaks, which, reflected in the clear waters with great distinctness, make a second picture for the eye not less striking than the original. Magnificent cañons and gorges, too, cleave its solid walls. Some of these show on their sides such sharp and striking carvings, the work of heat and rain and frost on the hard rock, as to make one almost fancy it human hand-work. Among these one is specially known as Sculptured Cañon, and is an object of considerable interest to tourists and explorers.

Of another cañon, Wright's, we have a very interesting description by Mr. W. W. Bailey, who belonged to a scientific exploring party which made a thorough examination of Nevada. He says:

"In the autumn of 1867, after a very arduous geological campaign on the Truckee and Humboldt Rivers, the party of which I was a member encamped in the mountains, in order to escape the dangerous miasms of the valleys, from which we had all more or less suffered. The larger part of our force, with its military escort, was at the opening of Wright's Cañon, six miles from the Orecma, on the Humboldt. We noticed here a fact which greatly alarmed us at first. The stream which supplied us with water became perfectly dry at noon, and we began to fear that our supply was exhausted. At night, however, to our great surprise, it began to flow again, suddenly, and with much noise. The same thing was repeated every day. This is the result, probably, of the great daily evaporation, which exhausts the water before it can reach the plain. The equally powerful radiation which takes place during the night, and possibly a direct condensation from the air, are sufficient causes for the restoration of the stream to its normal condition, if fluidity can be considered the natural state of anything in the arid regions of the Great Basin.

"The more invalid portion of our party were wisely ordered to encamp a mile or so farther up the cañon, and a rough mountain road or trail led to their airy retreat. The horses, too, which had fared but poorly on the sage-brush and grease-wood of the barren deserts, were removed to the same place, and by means of the scanty but rich supply of bunch-grass were able to prolong their wretched existence. It is marvelous how these animals can sustain life in a country where there is apparently so little forage; but they do live and thrive. One day my friend the photographer and myself determined to visit the invalids, and to explore the wonders of the hills. We found our unfortunate comrades encamped in a most romantic spot, around which rose the towering summits of the mountains. A series of bold and castellated ridges of granite attracted our attention, and we resolved to scale them. The worst part of our climb, the whole of which was arduous, was up a steep sage-brush hill, which led to the base of the attractive rocks. We found the granite wall very fantastic in outline, steep, and hollowed into a variety of curious caves. The weather, and perhaps the wind-borne sand, which is a powerful agent in this country, had acted upon it in a most peculiar manner. The surface of the cliffs in some places looked as if the granite had once been liquid, and a breeze gently blowing over it had rippled

the plastic material, which had then been suddenly petrified. The actual cause of the appearance is, however, quite different. It is doubtless owing to certain portions of the rock having a more durable composition than the rest, which is consequently eroded, leaving the harder parts standing in relief. Quite large junipers grew among these rocks, and offered a refreshing shade. The wind blew furiously on the top, and, owing to one especially dangerous-looking place, I informed my bolder companion that I would proceed no farther. He succeeded in reaching the pinnacle. While awaiting his return, I employed myself in gathering flowers, and was able to secure



Granite Bluffs in Wright's Cañon, Humboldt Range, Nevada.

some rare and curious Alpine plants. The photographer reported the view from the summit very extensive, and it certainly was grand where I beheld it. I was seated upon the edge of a frightful abyss, and looked apparently a thousand feet down into a small valley, whence the mass of the mountains rolled toward the plain in great brown waves, unrelieved by a tree or any green thing, unless may be a straggling juniper. The hills were covered with the sage, or artemisia, but even that is of an ashy hue, in common with most of the desert plants. The great valley of the Humboldt, stretching to the river and beyond, was equally barren, and then arose the Trinity Mountains and other ranges, until a white cap here and there in the

distance indicated the dim line of the Sierra Nevada. There was positively no color in the scene, and yet it did not lack for beauty. The soft shades of neutral tint and azure, and at evening the peculiar golden dust thrown over the mountains by the setting sun, are effects that are unique and unsurpassed."

From the alkali wastes of Nevada, broken with mountain-ranges, to green, fertile Oregon, with its splendid forests, lakes, rivers, and valleys, a veritable paradise of nature, is indeed a change. What has before been said of Washington Territory may be said also in great measure of Oregon, for they are the result of the same general conditions, and equally merit the enthusiasm of those who pronounce this far Northwestern corner of our country as presenting an almost perfect union of all the gifts which Nature can bestow. In presenting some characteristic views of Oregon, we can not select a more typical region than that traversed by one of the noblest of American rivers, the Columbia, which most people living east of the Mississippi recollect with pleasure, if for no other reason, from the fact that it furnishes our markets with their chief supply of that finest of all fish, the salmon. The reference to the Columbia made in the preceding article was, it will be remembered, of the most casual kind, and did not attempt to sketch river scenery, of its kind, unsurpassed anywhere.

A few miles up the river from its mouth, where a dangerous bar churns the waves of the Pacific into terrible breakers which make the passage difficult except at certain times of wind and tide, lies the little town of Astoria, founded by John Jacob Astor as the headquarters of the fur company by which he tried to dispute the supremacy of the Hudson Bay Company. Here the stream is twelve miles wide, a noble expanse more like a bay or a lake than a mere river. A writer thus describes this part of the Columbia, as seen at early dawn: "The great river, still lake-like in breadth and quietness, lay rosy in the dawn. The wonderful forests, whose magnificence our tame and civil imagination could not have conceived, came down from farthest distance to the very margin of the stream. Pines and firs two hundred feet in height were the somber background against which a tropical splendor of color flickered or flamed out, for even in this early September beeches and oaks and ash-trees were clothed with autumn pomp; and on the north, far above the silence of the river and the splendid shores, four snow-crowned, rose-flushed, stately mountains lifted themselves to heaven. For miles and miles and miles Mount Adams, Mount Jefferson, Mount Rainier, and Mount St. Helen's make glad the way. Adams and Jefferson have an unvarying grandeur of form, a massive strength and nobility as it becomes them to inherit with their names. Mount St. Helen's rises in lines so vague and soft as to seem like a cloud-mountain. Rainier, whose vastness you can only comprehend when you see it from Puget Sound, looks, even from the river, immeasurable, lying snow-covered from base to peak."

Portland, which is the goal of the San Francisco steamers, lies one hundred and ten miles up the river, though not on the river, being twelve miles up on the Willamette, one of the tributaries of the Columbia, a busy, thriving place. But it is not

the works of man, but of Nature, that we are now anxious to see. As we sail up the broad stream we gaze with wonder on the mountain-shores, a mile and a half apart, and shooting sharp and bold into the air thousands of feet. A solid wall along the river for miles and miles, one can hardly see a rift or gorge in their huge sides for a long distance. Then a cañon suddenly opens, and you see, stretching far be-



Castle Rock.

yond, other mountains, coming down to link themselves in an unending chain, and glimpses of far-off reaches of meadow or gray fields of rock. Sometimes you are dazzled by a glorious water-fall dancing out of the very sky—first a fluttering cobweb,



The Cascades.

then a gleaming ribbon, then a filmy veil of spray, then a swift cascade leaping from rock to rock, then a resistless rush of water.

But the most beautiful thing of all is found in the great forest with its peerless pine, spruce, and fir trees, many of them rising straight in the air three hundred feet, with not a crook or bend in those symmetrical stems. This is the crowning glory of Oregon scenery, and it may be safely stated that nowhere out of this region can be seen such specimens of the trees on which hang our great lumbering interests. But to enlarge on this would be only to repeat what has been said concerning Washington Territory.

Sometimes we find our river flowing straight and untroubled, sometimes it parts on rocky mounds or islands, and runs shallow and dangerous. Sometimes it expands into a chain of narrow lakes without any outlet, until, suddenly turning on our track, we find a way out of the watery labyrinth. The river, along this part of its course, shows the most astonishing caprices. Walls of basalt in vast ledges rise sheer from the shore, overtopping the farther mountains. Huge bowlders like Castle Rock lift themselves to a vast height from their broad, water-washed bases, while majestic ramparts like Cape Horn stand in columnar walls sometimes seven hundred feet high. No architecture from the hands of man could be so impressive as these columns, shafts, and obelisks, so profusely scattered in the river and along the banks. And through such grand gate-ways we finally come to the Cascades.

These are fierce and whirling rapids where the river falls forty feet, dashing down twenty feet at one bound. For five miles the water is a seething caldron of foam and curl, and no boat, however stanch, could live in such a course. So the difficulty is overcome in a short railway which makes the portage, but a railway which runs so near the river as to make the whirling water plainly visible as it dashes madly down in every variety of cascade and rapid. When we take steamer again, the brawling and rage of the stream have been succeeded by a surface as smooth as a mill-pond.

By-and-by we get into the heart of the mountains, which tower higher and closer to the river-brink as we proceed. The river narrows and again gets fierce and turbulent, for the wind whistles through the gorges, and during the spring freshets the surf roars in waves like those of breakers on a rock-bound sea-coast. The cliffs on the brink lift in walls of basalt from four hundred to twelve hundred feet high, with occasionally a bold rampart of twice the height. As we look back through some vista broader than common to the south, we see the shining, snow-covered Mount Hood literally filling the horizon. With this foreground of river and forest, and all this blaze of color set against the cold glitter of the ice-peak and the warm blue of the sky above, Mount Hood is more splendid than pen and brush can delineate.

We now come to Dalles City, the second town in Oregon, and the base of supply for the Idaho miners, and to which they send their gold for shipment. Now the great cliffs disappear, and we enter the sand-region. Nature's scene-shifting on the Pacific coast is one of her most curious phases. From forests as grand as those of the tropics to desolate mountain-peaks, from placid lake to roaring cataract, from the richest greenness to Sahara sands—it is but the work of a few minutes. One's thought is stirred and delighted by such wonderful changes.

The wind now blows the sand in a fine rain that fills the eyes, the ears, and the clothes, if there is a stiff breeze blowing: or, if not, the vision takes in a wide plain of glaring white sand, melancholy though still beautiful, as it is set against a background of green-belted, white-topped mountains. The fifteen miles of portage necessary show superb river scenery wherever the sand will let you see it. Here the Columbia is a succession of rapids, falls, and whirlpools, where the *dalles*, rough flagstones which give their name to the place, make crooked and narrow channels for the

stream. We now see every form or tint, every caprice of motion, which water can take on. Below the great fall the whole volume of the stream—whose branches stretch north through British Columbia, east through Idaho and Montana, south and



Mount Hood.

west into Nevada, and reaching down gather in the icy rivulets of the Rocky Mountains—pours through a gate-way not fifty yards in width, whose sides are steep precipices, hewed as by a stone-mason's chisel. The smooth and glassy water slides by in brown shadow, to be torn into ragged ribbons by the rocks below, even as it has been

dashed and beaten above at the great falls. Here the river is a mile wide, and plunges over a wall twenty feet high, stretching from shore to shore.

These falls are known as the Salmon Falls, on account of their display of one of the most wonderful facts of fish-life. The salmon come up here in incredible numbers, and shoot the falls on their way to the quiet river above, when about to spawn. They leap up like flashes of light over the tumbling waters, and it is most fascinating to watch them as we stand on the slippery stones, and see these scaly gymnasts charge at the barrier. Up they come through the gleaming rapids, a solid army of fish,



Salmon Falls.

making the whole river gleam with color. They no more mind precipice and torrent than they would a summer pool. Swiftly they swim to the white whirlpool below. Suddenly something bright and glittering is seen in the air, and something glides up the stream above the fall. The daring fish has made its leap over rock and water-fall, and has found shelter above. Or, perhaps, the flash in the air is in vain, and the bruised creature, wounded on the sharp rocks below, floats bleeding down the stream to die. So they come on in countless thousands, ever strong and fearless, and leap, to win or lose, all the day and for half the days of the year.

The leaps of the salmon as they make their desperate efforts to obey the instincts

of nature, are not the only evidences of life that we see about the falls. Dirty, scantily clad Indians swarm close at hand with spears, and kill the leaping fish by thousands. Not content with sufficient to satisfy their appetite or even to provide against the future, the red-skins slay for the purpose of wanton bloodshed, and throw the beautiful and delicious fish, fit for the table of a king, on the bank to rot, and fill the air with an insufferable stench. The Oregon Indians, and particularly those who live on the banks of the Columbia River, are perhaps among the most loathsome and repulsive specimens of their race. Most scantily clad, reeking with vermin, thoroughly idle and worthless, imbued with the worst vices of the white man, with no trace of his virtues, the red-man of this section is a nuisance and an eye-sore, far inferior to the Indian who lives farther north or to the savage of the plains in the south. It is with pleasure that the whites anticipate the extinction of these miserable creatures, who, however they may have been wronged in the past, show such an utter degradation to-day as to be but little above the animals which they pursue in the chase.

Above the Dalles the forests disappear, and for miles on miles little else in the way of vegetation can be seen than the thick brown grass which clothes the banks with its sere and dismal line. The scenery has become tame, and the tourist no longer has any inducement to proceed higher than Wright's Harbor, which is two hundred and fifty miles from the sea. Steamers, however, ply for four hundred miles, and then a queer little boat runs up the Snake River in Idaho. When the Northern Pacific Railway is finished, connecting the head-waters of the Missouri with those of the Columbia, there will be opened an incalculable wealth to trade, and a remarkable wilderness for the tourist to visit.

Eastern Oregon is a vast region which is now but comparatively little known. It is, properly speaking, that region lying east of the Blue Mountain range which runs, in a general way, parallel with the Cascade and the Coast ranges of mountains, the latter being close to the sea-border, while the Cascade Mountains pretty nearly bisect the State. Near the Idaho border there has been a very considerable overflow of the mining population from the former State, but Eastern Oregon is for the most part sparsely settled.

The lands in the valleys of Eastern Oregon may be divided into three classes: the bottom-lands, consisting of alluvial lands of great depth and richness; the foot-hills, which furnish many thousand square miles of splendid wheat acreage; and the pasturage-lands of the upper hills, which are also good for wheat when irrigated. These hill-sides furnish a very rich vegetation, a great variety of sweet and nutritious grasses for sheep and cattle. In fact, the whole of Oregon is admirably adapted for stock-raising and the growth of winter wheat. Through most of these valleys run tributaries of the Snake River, which are the sources of life and vegetation. Between the Blue and the Cascade Mountains lies a great stretch of open, rolling country—bare, rocky hills, with hardly a tree or a bush to be seen, except bunch-grass and sage-brush. The large flocks of sheep, which within a few years have been established

on different ranches throughout this region, have in great measure changed the character of the country, and now a richer order of vegetation has sprung up with the close-cropping of the sage-brush by the great flocks which thrive and fatten where other animals would starve.

The whole State of Oregon has an area of ninety-five thousand square miles, and has average dimensions of three hundred and sixty miles by two hundred and sixty. On the north is Washington Territory, from which it is partly divided by the Columbia River; on the east is the great mining State of Idaho, the Snake River furnishing a portion of the boundary; and on the south are the States of Nevada and California, while the huge billows of the Pacific dash against its western bounds. The western half of the State is very mountainous, and superbly endowed with rich soil and noble timber. The system of water-courses is diversified, and all the natural conditions are eminently favorable for the growth of a wealthy and prosperous community.

Western Oregon is not only more easily accessible, but is most interesting to the tourist on account of its natural beauty and its more agreeable social phases. A majority of the inhabitants of the State are settled in the Willamette Valley, which extends about two hundred miles south from Portland, the capital of the State, with a width of some forty or fifty miles. The Willamette River runs into the Columbia, about twenty miles above Portland. This valley, on account of its splendid climate, admirable soil, and fullness of natural resources, is by far the most notable portion of Oregon.

A little picture of an Oregon city, its population, and those characteristics which belong, more or less, to all new places, may not prove devoid of interest to our readers. Mr. Wallis Nash, who has lately written a book on Oregon, thus describes the little city of Corvallis, which lies about a hundred miles below Portland, on the Willamette River: "Just a mile from Corvallis, on a gently rounded knoll, we look eastward across the town, and the river, and the broad valley beyond, to the Cascade Mountains. Their lowest range is about thirty miles off, and the rich, flat valley between is hidden by the thick line of timber, generally fir, that fringes the farther side of the Willamette. Against the dark line of timber the spires of the churches and the cupola of the court-house stand out clear, and the gray and red shingled roofs of the houses in the town catch early rays of the rising sun. The first to be lighted up are the great snow-peaks, ninety, seventy, and fifty miles off—a ghostly, pearly gray in the dim morning, while the lower ranges lie in shadow; but, as the sun rises in the heavens, these same lower ranges grow distinct in their broken outlines. The air is so clear that you see plainly the colors of the bare red rocks, and the heavy, dark fir-timber clothing their rugged sides. Ere the sun mounts high the valley often lies covered with a low-lying, thin, white mist, beyond and over which the mountains stand out clear. For some weeks in the late summer heavy smoke-clouds, from the many forest and clearing fires, obscure all distant view. This last summer fires burned for at least fifty miles in length, at close intervals of distance, and the dark gray pall overlay the mountains throughout. Behind the house,

and in easy view from the windows on either side, are the Coast Mountains, or rather hills.

"Mary's Peak rises over four thousand feet, and is snow-crowned for nine months in the year. The outlines of this range are far more gently rounded than the Cascades, and timber-covered to the top. Save for the solid line of the heavy timber,



Corvallis.

the outlines of the Coast Range constantly remind us of our own Dartmoor; and the illusion is strengthened by the dark-red soil where the plow has invaded the hills, yearly stealing nearer to their crowns. Mary's Peak itself is bare at the top for about a thousand acres, but the firs clothe its sides, and the air is so clear that, in spite of the seventeen miles' distance, their serrated shapes are plainly and individually visible as the sun sinks to rest behind the mountain.

"Such sunsets as we have! Last night I was a mile or two on the other side of the river as night fell. Mount Hood was the first to blush, and then Mount Jefferson and the Three Sisters in turn grew rosy red. From the valley I could not see the lower Cascades, but these snowy pyramids towered high into the sky. One little fleecy cloud here and there overhead caught the tinge, but the whole air on the eastern side was luminously pink. Turning westward, the pale blue sky faded through the rainbow green into the rich orange surrounding the departing sun, and the westward mountains stood solidly and clearly blue in massive lines."

Throughout this region the eye observes a great number of white farm-houses, almost as thick indeed as in New England. Near every farm-house is an orchard, and

of course a big barn, oftentimes bigger than the house. The houses are of three kinds, log-houses, box-houses, and frame-houses. The first sort is by far the most picturesque, but it is fast becoming obsolete; but it is now for the most part used as a wood-shed or pig-pen. Still, the old-fashioned log-house, when at its best, is an exceedingly comfortable building, with its low, solid, rugged walls, its overhanging shingled roof, great chimney and fire-place. By the side of the fire-place, from two deer's or elk's horns fastened to the wall, hang the owner's rifle and other guns. Over the mantel-shelf stands the ticking clock, and curtained off from the main room, with its roughly boarded floor, are the low bedsteads of the family, covered with patchwork. On the whole, it is a rude yet inviting scene.

Round the house is the home-field, generally the orchard, sown with timothy-grass, where range four or five young calves, and a sow or two, with their hungry, rooting youngsters. The barn, log-built also, stands near by, with two or three colts, or yearling cattle, grouped around. The spring of cold, clear water runs freely through the orchard, but ten yards from the house-door, hastening to the "creek," whose murmur is never absent, save in the few driest weeks of summer-time.

Snake-fences, seven logs high, with top-rail and crossed binders to keep all steady, divide the farm from the road, and a litter of chips from the axe-hewed pile of fire-wood strews the ground between wood-pile and house. Here and there, even in the home-field, and nearly always in the more distant land, a big black stump disfigures the surface, and betrays the poverty or possibly the carelessness of the owner, who has carved his homestead from the brush. As time progresses the log-hut is mostly replaced by far more pretentious houses, and the farm-houses are as attractive as in the long-settled States of the East. The Willamette Valley and various other parts of Western Oregon present now as striking an exhibition of a highly advanced agricultural community as probably can be found anywhere in America.

Between the Willamette Valley and the ocean there are beautiful minor valleys, through which streams pour into the Willamette, and others again whose water-courses feed the great ocean itself. Among the latter is the Yaquina Valley, which is a scene of pastoral and woodland loveliness difficult to match. Let us again take a description from Mr. Wallis Nash, who followed the course of the valley on horseback.

"Presently we leave the Yaquina River, which for over twenty miles we have followed down its course; for never a mile without taking in some little brook where the minnows are playing in busy schools over the clean gravel, and the crawfish are edging along and staggering back as if walking were an unknown art practiced for the first time. The river has grown from the burn we first crossed to a tidal water-course, with a channel fifteen feet in depth, and, having left its youthful vivacity behind, flows gravely on, bearing now a timber-raft, then a wide-floored scow, and here the steam-launch carrying the mail. But we climb the highest hill we have yet passed, where the aneroid shows eleven hundred feet above the sea-level, and from its narrow crest catch our first sight of the bay, glittering between the fir-woods in the morning sun.

"We leave the copse-woods behind and canter for miles along a gently sloping, sandy road; the hills are thick in fern and thimble-berry bush, with the polished leaves and waxy-white flowers of the sallal frequently pushing through. We have got used by this time to the black, burned trunks, and somehow they seem appropriate to the view. But the sound of the Pacific waves beating on the rocky coast has been growing louder.

"That dim blue haze in the distance is the morning fog, which has retreated from the coast and left its outlines clear. On the right is the rounded massive cape, on the lowest ledge of which stands Foulweather Light-house. The bare slopes and steep sea-face tell of its basaltic formation, which gives perpendicular outlines to



Yaquina Bay.

the jutting rocks against which, some six miles off, the waves are dashing heavily. Between that distant cape and the Yaquina Light-house Point the coast-line is invisible from the height on which we stand, but the ceaseless roar tells of rocky headlands and pebble-strewed beach. Below us lies the bay, a calm haven, with its narrow entrance right before us, and away off, a mile at sea, a protecting line of reef, with its whole course and its north and south ends distinctly marked by the white breakers spouting up with each long swell of the Pacific waves. Under the shelter of the light-house hill, on the northern side, stands the little town of Newport, its twenty or thirty white houses and boat-frequented beach giving the suggestion of human life and interest to the scene."

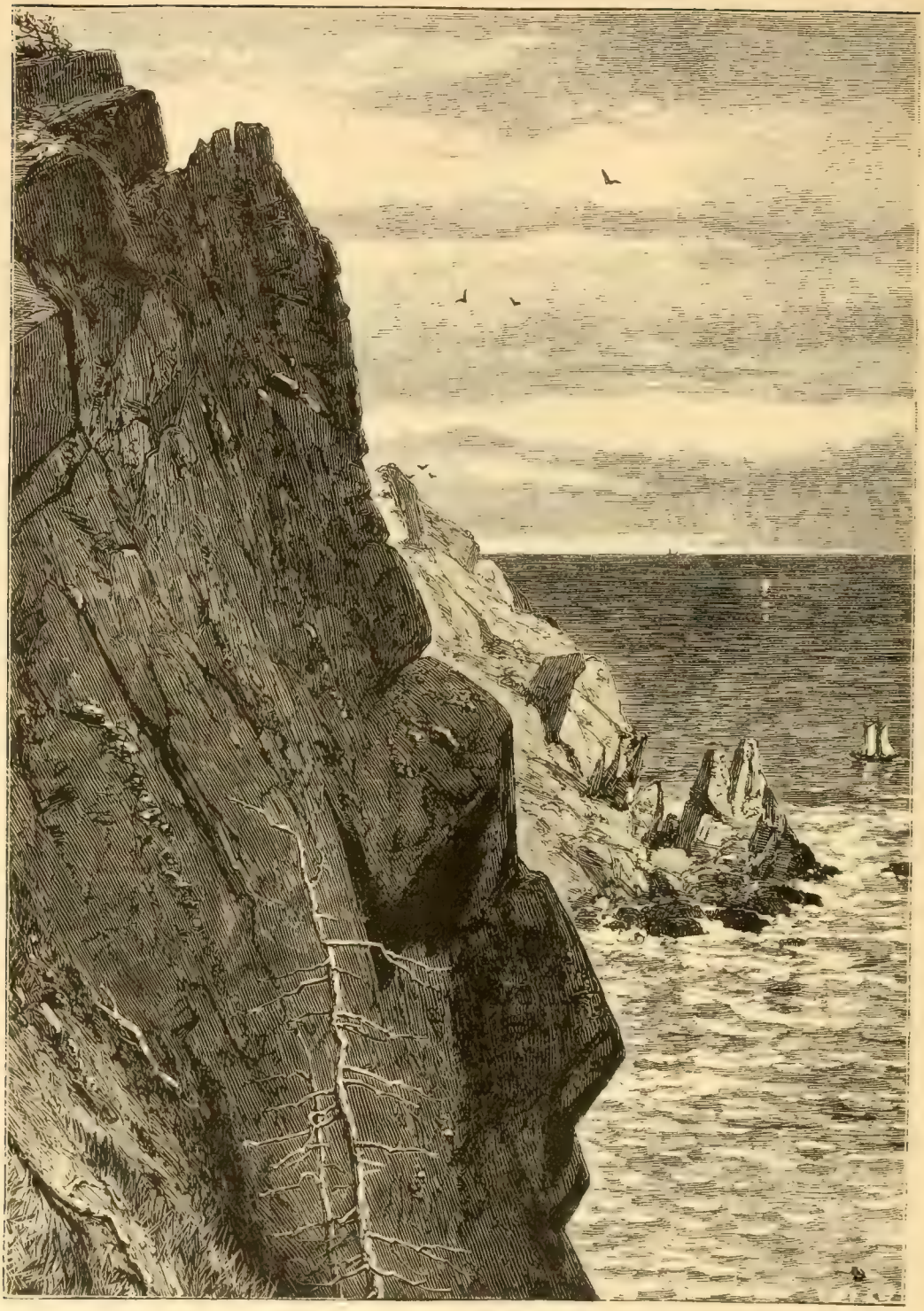
SUMMER HAUNTS BY THE SEA.

Striking characteristics of the upper New England coast—The cliffs of Grand Manan—Mount Desert and its remarkable fascinations—Sea-shore, forest, mountains, and lakes happily united—The Eastern Shore—From Portland to Portsmouth—The Isles of Shoals and their traditions—Quaint old historic towns—Nahant and Swampscott—Newport, the queen of American watering-places—Its former commercial glory and historic importance—The ocean-scenery about Newport—Social life at Newport—Coney Island, the antipodes of Newport—A typical democratic watering-place.

THE North Atlantic coast-line, which extends from the eastern boundary of Maine to Old Point Comfort, Virginia, presents to the pleasure-seeker scenes of the most varied interest and fascination, whether he affects the gay resorts of fashion, or loves the sweet and stimulating delights of the ocean and ocean-scenery for their own sake. There is an embarrassment of riches offered to his choice which might well perplex him, and indeed causes many a one to flit from place to place on our grand sea-border, catching fresh phases of enjoyment and suggestion at each of these charming summer communities. The characteristics of the shore give a different setting to almost every mile of the coast, and hence each sea-side watering-place has its own physiognomy and character, and offers something odd and dissimilar to its fellows, in spite of certain general facts in common. Let us make a summer journey to some of the typical watering-places of our Northern sea-coast, to those which are generally associated in the public mind with the movements of the throngs of pilgrims who leave home and business for the tonic of the salty air and tumbling sea-waves. In doing this, we shall also ask our readers to give a passing glance at some minor places, in themselves no less delightful than those which have been stamped with the seal of fashion, and where quiet souls find, perhaps, a more perfect solace than in the much-frequented resorts.

It is difficult to plan a more delightful summer journey than along that portion of the New England coast which extends from Portland to Boston, and which by a stretch may also be made to include the sea-line east of Portland. This region is known as the Eastern Shore. Irregular and rocky, deeply indented with bays of the most picturesque outlines, Nature has supplied it with nearly every variety of beauty, from frowning, jagged cliffs, to long, smooth, curving beaches, with their background of greenery. The lover of the sea-side here finds a boundless choice to satisfy his most exacting taste.

As we pass along the coast we shall find evidence how keenly its wonderful beau-



Grand Manan.

ties are appreciated. Splendid villas thickly dot the irregular border; here and there, on breaker-beaten island or bold projection of the coast, hotels and cottages announce the summer watering-place; while on the long stretches of otherwise unoccupied beach, or on the grassy tops of headlands, may be often seen the gay tents of a camping-out party. Nearly every mile some evidence presents itself, during the summer months, of the fascination exercised over the tastes and imaginations of visitors.

Let us begin our journey far away on the eastern border of Maine, at a wild and rugged island out of the dominion of the United States—the Isle of Grand Manan—the home of fishermen and wild sea-fowl, but abounding with every condition to attract the artist and lover of Nature, the sportsman and all addicted to the breezy and stirring pleasures of out-door life. It lies a little southeast of Eastport, and is about twenty miles long by five miles wide. It has no mountains, but the shores lift in tall, weird, scarred, strangely marked cliffs. At the northern end of the island they are four hundred feet high, and the sea beats against their base in a ceaseless conflict.

Manan is an Indian word, meaning "island." The French *voyageur*, Champlain, passed the island in 1605, and speaks of the island as *Manthane*. Up to the time of the Revolution it was only inhabited by Indians, but now a number of fishing villages have grown on its shores, containing about eighteen hundred of the bold toilers of the sea. Although it is only nine miles from the mainland, it often takes a week to cross the narrow channel or sound. Fogs abound here; the tides are terribly swift and strong; gales are frequent, and these often unite to retard the progress of a sailing-vessel. When the big hotels go up, as they will some day on this wild, sea-girt place, steamers, of course, will remove the difficulty, and make the place easy of access.

There is a charm in grand sea-beaten cliffs which throws its magic over every one. The sea chafes without rest at their base, tearing down great masses of rock, eating out channels, and caves, and long galleries, carving pinnacles and other fantastic shapes, as if with the chisel of a sculptor—the waves for ever hurling themselves on the frowning wall, and the rocks for ever set hard and defiant against the restless waves. Then the wild sea-birds that hover about the rocky heights; the strange marine forms which are stranded by the retiring waves in caves and recesses; the fogs that sail up from the sea and shroud crag and headland, ships and water, sky and space, in their dense veil; the breezes that blow rich with the salty flavor of the Atlantic, and fill the lungs with a glow like that of champagne in the blood; the freshness, the breeziness, the expanse, the wild ruggedness, the roar and break of the sea, the stern defiance of the rocks, the sails that come and go with such free and graceful wings over the blue outing—all these things thrill the blood and charm the eye.

But, if we find such attractions at Grand Manan, we discover a still more potent charm at Mount Desert. The bold and diversified coast of Maine presents aspects which place it apart as a section of the Atlantic coast-line, and Mount Desert Island,



Castle Head, Mount Desert.

which lies in Frenchman's Bay, about forty miles southeast from Bangor, may be regarded as one of the most striking types of this peculiar beauty. We reach the island, which has of late years attracted more attention, perhaps, than any other sea-side summer-resort in the country, by steamboat from Portland or Bangor—a brief voyage, skirting a striking shore, and full of pleasant surprises as the boat winds through intricate channels and pretty islands which fringe the irregular line of the coast. Mount Desert has an area of one hundred square miles, its dimensions being fourteen miles in length and eight miles at its greatest width. At the northern end it approaches the mainland so nearly that a bridge has been thrown across, and it is almost pierced in two parts by an inlet known as Somes's Sound, which is seven miles long.

"The island," says Mr. Carter, in his "Summer Cruise," "is a mass of mountains crowded together, and seemingly rising from the water. As you draw near they resolve themselves into thirteen distinct peaks, the highest of which is two thousand feet above the ocean. Certainly only in the tropics can the scene be excelled—only in the gorgeous isles of the Indian and Pacific Oceans. On the coast of America it has no rival, except perhaps at the bay of Rio Janeiro." The assemblage of picturesque features at Mount Desert is quite remarkable. It is surrounded by seas, crowned with mountains, and gemmed with lakes. On the bold, beetling cliffs of its shores the breakers for immemorial time have gnawed and bitten with furious attack. Here, in one picture, are frowning cliffs echoing with the roar of restless breakers; far reaches of bay, dotted with lovely little islands; pellucid mountain-lakes reflecting the precipices that tower above them; rugged gorges clothed with primitive forests; and sheltered coves where the wavelets dimple the shining beach. Masses of rock, heaped on one another as if hurled by giants in their play, are piled up on the shores; and hard by one perceives wonderful sea-caverns, where the retiring waves have left sea-creatures of the strangest form and beauty. On the mountains are frightful precipices, far prospects of the glittering, restless sea, mazes of land and water, and magnificent forests of fir and spruce. Such a union of landscape attractions Nature rarely affords, even when in her most lavish humor.

Mount Desert was discovered by the French under Champlain in the early part of the seventeenth century, and they gave its name, as expressive of the wild and savage aspects of the mountains and cliffs that front the sea. In 1619 the French formed a settlement, which was named Saint Sauveur, but in a few years it met a cruel fate. The Virginian settlers were accustomed to fish on the New England coast, and the captain of an armed vessel, hearing from the Indians of the settlement, sailed down on it, and with a single broadside made himself its master, some of the settlers being killed and others carried into captivity. Abraham Somes made the first permanent settlement in 1761, and built a house at the head of the sound which now bears his name.

There are now three townships on this island—Tremont, Mount Desert, and Eden; and of the several harbors the best known are Southwest, Northeast, and Bar Harbor. The latter is on the eastern shore, opposite the Porcupine Islands; and the village at this harbor known as East Eden is the principal haunt of tourists and summer visitors. Containing fourteen large hotels of more or less excellence, this village has great advantages on account of the facilities it affords for boating and fishing, and its convenient place with relation to the multitude of interesting sights and objects with which the island abounds. The aspect of summer-life differs considerably here from that characteristic of other watering-places. The *dolce far niente*, the supine and empty listlessness, the dawdling on hotel-piazzas by day, and the fashionable dissipation by night, give place at Mount Desert to alert and active enjoyment of all the beauties of nature. Walking, sailing, and sketching parties keep the little summer population in perpetual movement, and the pale-faced denizens of cities, under the

influence of the bracing air, the stimulus of lovely scenery, and the life-giving effects of exercise, soon become new men and women. Brown, bright-eyed girls, with short skirts, huge straw hats, and mountain-staff in hand, may be seen skipping about in every part of the island, and ready to dare almost any danger in climbing the rocks, which are sometimes formidable, even to the experienced cragsman. At almost every turn you will meet joyous parties bent on exploring every nook and corner, and re-



Cliffs at Mount Desert.

gardless of fatigue and peril. This hearty enjoyment of out-door life is the pervading spirit of the summer visitors, and the most lazy and listless people soon feel the effect of the influence.

The mountains of Mount Desert are seen to best advantage from the sea, and the approach to the harbor gives a fine succession of scenic effects. The mountains are in the southern half of the island, and lie in seven ridges running nearly north and south. There are thirteen distinct peaks, the highest of which is known as Green Mountain, and the next in size, separated from the other by a deep gorge, as Newport. The western sides of the mountains slope gradually upward to the summits,

but on the east they break off sharp in huge precipices. Newport rises almost in an abrupt line from the water's edge a thousand feet in height.

The exploration of Mount Desert affords a continual series of delightful surprises. The ascent of Green Mountain rewards the climber with a panorama of land and water difficult to match anywhere in beauty and picturesqueness. But perhaps the greatest pleasure is found in exploring the series of rocks and cliffs extending along the shore. One of the notable places is known by the not very romantic name of "The Ovens," which lie some six or seven miles up the bay. The shore at this point has a delicious serenity and repose. The waters ripple calmly at the base of the cliffs, and only when the wind is high do breakers dash against the sculptured rocks. Fine trees crown the top of the perpendicular walls, and cast their shadows on the beach. Grass and flowers grow along the range, and in the crevices of the rocky face rich greenery and flowering shrubs may be seen, making a vivid contrast with the many-tinted walls. "The Ovens" are cavities worn by the waves in the sides of the cliffs, some of them being large enough to hold thirty or forty people. All these caves are natural aquaria, where the visitor sees strange and beautiful forms of marine life, sea-anemones, star-fish, sea-urchins, etc. The sunny bay, the white-winged yachts gliding on the water, the peaceful shores, the imposing cliffs, crowned with the green forest, make a picture of great loveliness.

When the winds lash the ocean into fury, the more exposed cliffs of Mount Desert offer a grand spectacle. The following description of a storm as witnessed at "Schooner Head"—so called from the appearance of its sea-face, which derives its principal interest from the "Spouting Horn," a wide chasm in the cliff extending down to the water, and opening to the sea through a small archway below high-water mark—gives a forcible picture of such a scene:

"The breakers hurl themselves with such wild fury through the cavernous opening against the wall of rock, that their spray is hurled a hundred feet above the opening at the top of the cliff, as if a vast geyser were extemporized on the shore. The scene is inspiring and terrible. Visitors to Mount Desert but half understand or appreciate its wonders if they do not visit its cliffs in a storm. On the softest summer day the angry but subdued roar, with which the breakers ceaselessly assault the rocks, gives a vague intimation what their fury is when the gale lashes them into tumult. At such times they hurl themselves against the cliffs with a violence that threatens to beat down the rocky barriers and submerge the land; their spray deluges the abutments to the very top, and the thunder of their angry crash against the rocks may be heard for miles. But at other times the ceaseless war they make upon the shore seems to be one of defeat. The waves come in full, sweeping charge on the rocks, but hastily fall back broken and discomfited, giving place to fresh levies, who repeat the first assault and, like their predecessors, are hurled back defeated. The war is endless, and yet by slow degrees the sea gains on its grim and silent enemy. It undermines, it makes channels, it gnaws caverns, it eats out chasms, it wears away little by little the surface of the stone, it summons the aid of frost and

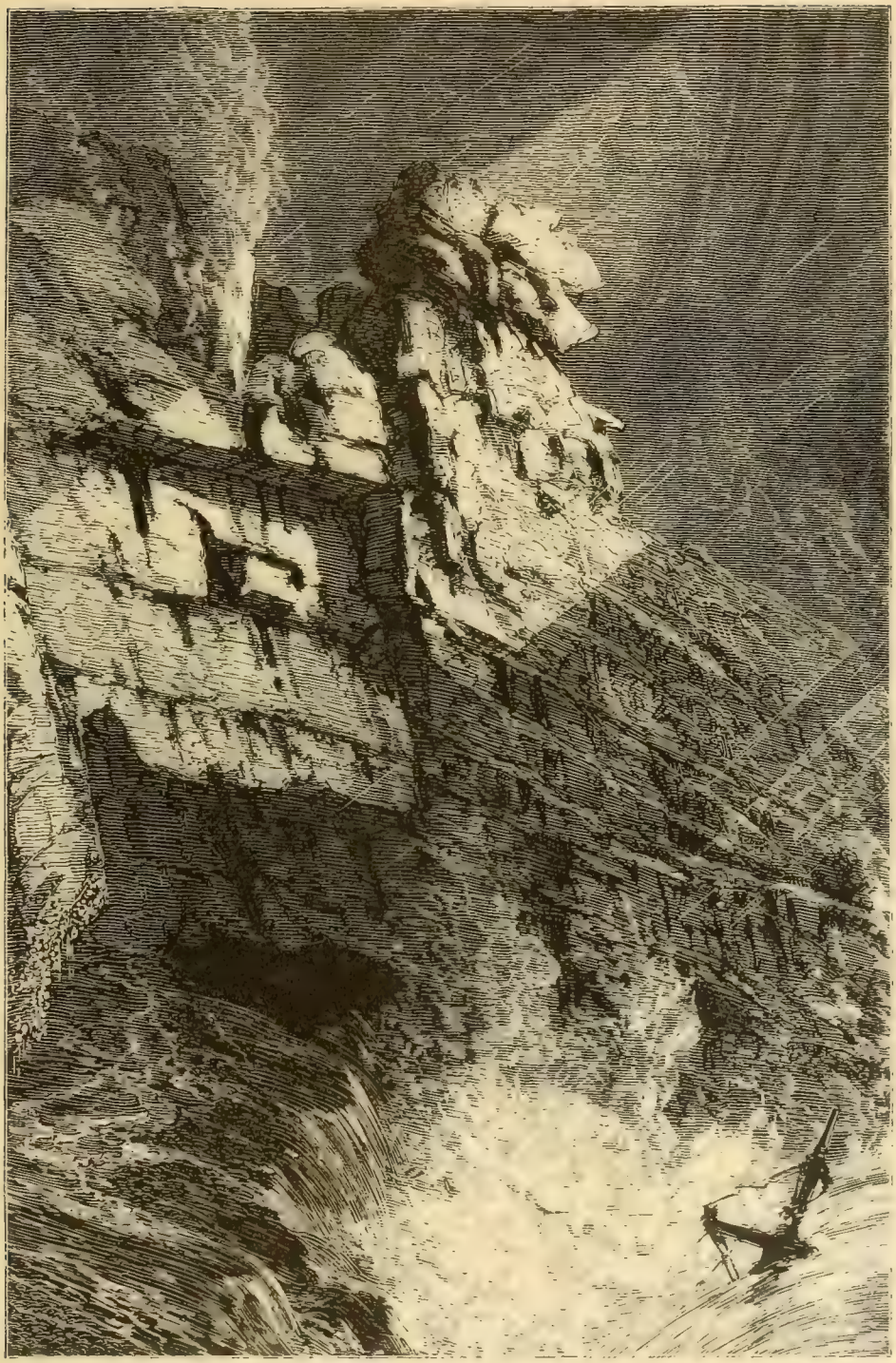
heat to dislodge and pull down great fragments of masonry, it grinds into sand, it gashes into scars, and it will never rest until it has dragged down the opposing walls into its depths."

One of the pleasing features of Mount Desert is found in its striking cloud-effects. The sun is shining brightly, when suddenly the mist begins to creep in over the surface of the water, ascending in rapid drifts the side of the mountain, and gradually enveloping the islands of the bay till the whole landscape is blotted out from view. In another hour the veil is rent; the mountains pierce the solid shadows; the islands again gleam in the sunlight, and the landscape glows anew with life and beauty. For one sitting on the rocky headlands on the seaward side of the isle, on a day when the fog and sun fight for supremacy, the pictures which the fog makes and unmakes are weird and beautiful. Sometimes the fog-banks, blotting out the base of the islands, leave only a slender line of tree-tops painted against the blue ether, like forests in the sky. Then, again, vessels sail through the mist like shadowy ghosts, the top-sails flashing like the white wings of huge birds. Suddenly the fog shifts, and one single vessel stands out like a brilliant picture, all the rest being wrapped up in the fog. The pictures thus formed are almost endless, and make a series of dissolving views of the most unique sort. Again the eye observes the marvelous exhibition of a mirage, when fleets appear sailing in the upper air.

To recount the many wonders and beauties of Mount Desert would take too much space. Its mountains, its beetling, jagged walls of cliff, frowning on the sea-front, suggesting old Norman keeps, cathedrals, ruined temples, and other wonders of architecture; its charming lakes and fine old forests; its numberless views rewarding the seeker with the greatest variety of effects; its striking phases of atmosphere, fog, and light, producing aërial pictures of the greatest beauty—all these make Mount Desert a justly celebrated resort for the lover of Nature. It is only a few years since the attractions of the island have become celebrated, and now it is one of the best-known summer haunts of the United States, not because it furnishes the best hotels and the gay show of fashionable equipages and costly dresses, but because it brings the visitor in close contact with so many aspects of the sweetness and grandeur of Nature.

On our way toward Portland we pass by Castine and Pemaquid Point, both exceedingly picturesque in their surroundings, and even yet bearing the remains of the old forts linked to interesting traditions of colonial and Revolutionary times. Near the latter place is Monhegan Island, just off which occurred a gallant naval action during the Revolution between the American ship Enterprise and the English ship Boxer, resulting in the capture of the latter, and the death of both commanders. It is this sea-fight of which Longfellow sings in his "Lost Youth":

"I remember the sea-fight far away
How it thundered over the tide!
And the dead captains as they lay
In their graves overlooking the tranquil bay
Where they in battle died."



The "Spouting Horn" in a Storm

Nothing can be more striking than the ocean-scenery about Portland, or the situation itself of that most rural of New England cities, as it perches on its high cliffs above bay, valley, island, and sea. Settled early in colonial history, its quaint old houses continued to mark many of the streets till the fire of 1868, which swept away the ancient aspect of the city, and made place for the pretty modern town which has taken its place. The people of Portland may well be proud of their beautiful city, for, in site, surroundings of landscape, perfection of harbor, and general cheer-



Cliffs, Portland Harbor.

fulness of aspect, it has but few rivals. The landscapes about Portland are rather soft and cheerful than grand and rugged. The islands which dot its bay are bright in summer with the greenest grass and foliage, and are so numerous that they are said to equal the days of the year. This beautiful bay has been compared to the Bay of Naples, so broad is its expanse, so charmingly framed in ranges of green, undulating hills. Cape Elizabeth forms the outermost southern point of the bay, and is a series of lofty, jutting cliffs, rising abruptly from the ocean and crowned with wood

and shrubbery, relieving its gauntness. Two light-houses stand on the end of the cape, and from these a charming view of the bay and harbor, of the distant city, of the innumerable islands lying between shore and shore, and, in the distance, of the ragged and storm-beaten promontories to the north, may be obtained. Nearer Portland is Peak's Island, with its rich foliage, natural bowers, and lovely retreats; and close by again, Diamond Island, a pet place for picnics, as it is famous for its groves of fine trees, its rocky shores interspersed with pretty bits of beach, and its natural lawns of deep-green turf.

Cushing's Island is one of the most attractive spots in the harbor. High cliffs, crowned with shrubs and turf, hem it in, and here and there a low, rocky shore or graceful inlet. There is but one building on the island, a large hotel for summer sojourners, and the view from this is very extensive. It includes the harbor, ship-channel, and city, on the one hand, and the steep cliffs of Cape Elizabeth on the



Isles of Shoals.

other. In the near distance are the frowning bastions of Forts Preble, Scammell, and Gorges; the busy wharves of the city, crowded with shipping, are seen not far away; the islands present novel contrasts of shape and color; the heavy sea-breakers may be seen melting into the gentle ripple of the bay, and far away to the northwest the dim outlines of Mount Washington and the New Hampshire hills.

Charming, old-fashioned, slumbering New England towns mark the coast every few miles as we proceed on our way to the Isles of Shoals. If we choose to tramp along the shore, knapsack on the back—for this is by far the pleasantest and most satisfactory way of exploring the beauties of the Eastern Shore—we shall find it pleasant to rest every few miles at these quaint old places. The town of Wells, about thirty-five miles from Portland, is one continuous street, stretching for five or six miles along the shore, and everywhere commanding a noble and unbroken ocean-view. The little town bristles with history and legend, carrying the mind far back to the

olden time. One of its founders was John Wheelright, the friend and college-mate of Oliver Cromwell. Many a desperate Indian skirmish and foray was fought in its vicinity. George Burroughs, one of its early burghers, was a fierce and scornful derider of the witch-persecution, which cast such a stain on the early history of New England. According to tradition, the officers of the Bloody Council seized him as he was coming out of church, and haled him away to Salem, where he was hanged on Gallows Hill. The proof brought against Burroughs, who was very strong, was that he could hold a musket out at arm's-length by thrusting his finger into the muzzle. He had once seen an Indian do this, and repeated the feat, swearing it was a shame for a red-skin to do what a white man couldn't.

The long and beautiful beach, which we find crowded with summer idlers from the hotels, has been the scene of many a direful wreck, and here and there the bones of a lost ship protrude from the drifted sand, the grisly memorial of the terrible battle of human life with the winds and waves.

On the way from Wells to Old York, we pass the grand precipice known as the Pulpit. This is a perpendicular wall of rock about ninety feet high, and a hundred and fifty feet long, a buttress against which the Atlantic beats with a ceaseless battle. In severe storms it is said that the breakers dash their spray to its very top, and that it is with great difficulty one can stand upright upon it. Underneath the cliff is a curious basin hollowed out by the waves, in which a vessel of large tonnage could float without touching a mast or spar.

We pass by Kennebunkport, which has extensive ship-yards, and is thronged with pleasure-seekers in the summer, and after a brisk walk reach York, once known as Agamenticus, a name still perpetuated in the solitary mountain which lifts itself like a giant sentinel high above the surrounding country. The town is nearly two hundred and fifty years old, and, in spite of the gayety which it puts on with the advent of its summer population, still preserves many of its quaint old characteristics in the appearance of the houses and the ways of its people. Old York is very interesting in its relics of antiquity, and exceedingly quaint traditions hang about the old church, jail, and other buildings. One of its early clergymen, Parson Moody, was the hero of one of Hawthorne's most gloomy tales, in his "Mosses from an Old Manse."

Kittery is the most westerly town of Maine, and is separated from Portsmouth by the Piscataqua River. Here is located one of the navy-yards of the country, on an island in the harbor. All the surroundings of Kittery and Portsmouth are of great beauty, and well worth a lingering stay on the part of the traveler in search of the picturesque. Portsmouth is situated on the river-bank, about three miles from the sea, and looks out on a spacious and noble bay. "There are more quaint houses and interesting traditions," says one writer, "than in any other town of New England." But this claim probably would be disputed by many another place proud of its colonial traditions. It is truly an ancient and tranquil-looking place, with devious, deeply-shaded streets, which seem as if they had been dreaming for centuries. Portsmouth was settled in 1623, and took an important share in the stirring events of an early



A Picnic at the Isles of Shoals

period. It was first known as Strawberry Bank, from the great quantities of strawberries growing in the vicinity; and was at one time fortified all around by a wall of palisades to protect it from Indian attacks.

The chief natural attraction in the neighborhood of Portsmouth is the Isles of Shoals, a group of eight rugged islands about eight miles from shore, and one of the celebrated ocean resorts of the country, as several of them are covered with fine hotels and summer cottages. The isles are small—the largest, Appledore, only containing about three hundred and fifty acres. From the mainland they appear like low-lying clouds, but, as the little steamboat approaches, they separate into bleak and barren islets, with jagged reefs running far out into the breakers. Appledore rises in the shape of a hog's back, about seventy-five feet above the sea, and is divided by a picturesque little valley containing clumps of shrubbery, among which nestle the hotels and the pretty cottages attached to them. On these gaunt rocks the lonely beauty of the ocean can be enjoyed to the uttermost, for here the only sounds are the lash and murmur of the billows as they sweep and swirl around the ragged rocks. Close by Appledore is Smutty Nose Island, on whose perilous reefs many a gallant ship has been broken to pieces. The traditions of shipwreck, which attach to all these islands, indeed, are full of tragic interest, and from time immemorial they have wrought destruction to the mariner. Smutty Nose has of late years had the shadow of a still more gloomy tragedy hanging over it, for it was on this island that one of the most sickening murders in the criminal history of our country was perpetrated —the butchery of a fisherman's family by the Prussian, Wagner. Few events of this kind have been more sensational, or sent such a thrill of horror through the country.

Like many another wave-worn, lonely place, these islands are full of the traditions of Captain Kidd and other daring freebooters, and not without some stable foundation. Here was known to be a favorite haunt of the captain of the famous Adventure galley, and some genuine discoveries of treasure, it is said, have been made among these bleak rocks and caverns. The celebrated pirate, Blackbeard, who was such a scourge to the Atlantic coast during colonial times, was in the habit of spending much time on these islands, and his crew consorted with the half-savage fishermen, leaving a lasting impress on their moral and social habits.

Among the legends still told by the old fish-wives is that of one of Blackbeard's comrades, a Scot, who gained nearly as bad a reputation as his chief. His crew believed him invincible, and followed wherever he led. At last, after the rich booty of the Southern seas and the Spanish Main had filled his coffers to overflowing, he arrived on his native coast. His boat was manned, and he went ashore, and soon returned again bearing the almost lifeless body of a beautiful woman. The pirate cruiser set sail for America, and in due time came to anchor at the Isles of Shoals. Here the crew passed their time in concealing their booty and in carousing. The commander's portion was buried on an isle apart from the rest, and he dwelt with his beautiful companion, forgetful of his bloody trade, till one day a sail was seen in the offing. Before the pirate-ship got under way to meet the stranger, which was



Caswell's Peak, Star Island.

a king's cruiser, the outlaw revealed the place of his buried treasure to his mistress, and bound her by a fearful oath to guard the secret till his return, if it should be delayed till the crack of doom.

In the fierce battle which ensued between the freebooters and their assailants, the former were beaten, and, driven to desperation, blew up their powder-magazine, involving themselves and their foes in a common fate. A few mangled and blood-stained survivors reached the shore, and perished gradually by cold and hunger. The pirate's mistress remained true to the last, till she too, perhaps, succumbed to want and exposure. Report has it that she has been seen more

than once on White Island, a tall, shapely figure, wrapped in a sea-cloak, her head and shoulders uncovered except by a profusion of golden hair. Her face is described as exquisitely lovely and sad, and always gazing out at the sea in an attitude of intense expectation. It is believed by the superstitious islanders that her ghost is doomed to haunt these rocks till the sound of the last trump.

About a quarter of a mile from Appledore is the most picturesque of the cluster, Star Island, which contains the quaint little village of Gosport, the quaint-towered and steepled church of which crowns its highest point. On the west is Londoner's, jagged and shapeless, with a diminutive beach; while, two miles off, Duck Island



Bass Rocks, Gloucester.

raises its forbidding and dangerous form from the waters. Many of the ledges of the latter are insidiously covered at high water, and at ebb-tide are seen lined with sea-gulls, which avoid the inhabited islets.

These quaint, bleak, wave-battered rocks have a charm all their own, and the glamour of history and legend lends them an additional fascination, which fanciful persons are quick to feel. Thousands of summer pleasure-seekers have learned to love the Isles of Shoals as a place of unique delights. No one has written more lovingly of the spot than Celia Thaxter, the poetess, who was born on Appledore; and we can not better finish our brief ramblings than by a bit of description from her pen: "Swept by every wind that blows, and beaten by the bitter brine for unknown ages,

well may the Isles of Shoals be barren, bleak, and bare. At first sight nothing can be more rough and inhospitable than they appear. The incessant influences of wind and rain, sun, frost, and spray, have so bleached the tops of the rocks that they look hoary, as if with age, though in the summer-time a gracious greenness of vegetation breaks here and there the stern outlines and softens somewhat their rugged aspect. Yet so forbidding are their shores, it seems scarcely worth while to land on them—mere heaps of tumbling granite in the wild and lonely sea—when all the 'sapphire-spangled marriage-ring' of the land lies ready to woo the voyager back again, and welcome his returning prow with pleasant sounds, and sights, and scents, that the wild waters never knew. But, to the human creature who has eyes which will see and ears that will hear, Nature appeals with such a novel charm that the luxuriant beauty of the land is half forgotten before he is aware. The very wildness and desolation reveal a strange beauty to him. In the early morning the sea is rosy and the sky; the line of land is radiant; the scattered sails glow with the delicious color that touches so tenderly the bare, bleak rocks."

Between Portsmouth and Newburyport, Massachusetts, the ocean-shore is nearly straight, without the rugged bowlders and storm-hewed rocks which have hitherto marked the coast-line, and we find our journey over sunny stretches of beach instead of skirting craggy headlands and sinuous inlets, or leaping over yawning fissures and shapeless projections. Rye, Hampton, and Salisbury, occupy most of the limited coast of New Hampshire, and present charming reaches of sand, on which the waves break with a musical plash instead of dashing in thunderous breakers against walls of frowning rock. All along we find cozy sea-side cottages and summer hotels, and the beach is, with few breaks, alive with carriages, saunterers, and bathers.

Some three miles up the broad bay, which serves as the mouth of the Merrimac River, we espy the ancient historic town of Newburyport, built on an abrupt height. Once a town of great commercial importance, its trade is now nearly dead, though the people still proudly treasure the relics of their former glory. Newburyport was famous for its patriotic spirit during the Revolution. The first tea destroyed was in this town, having been taken from an old powder-house, where it had been stored for safe-keeping, and burned by the citizens in the open square. The first privateer was fitted out in this place, and the first company raised which joined the Continental army.

Though the business importance of the modern Newburyport has gone, it is a place of great wealth and social importance. Many rich and prominent people live in the town, and it contains a literary circle which includes not a few of the distinguished people in American letters, who have their summer homes here, a fact which, in connection with the charm of the place, attracts not a few summer visitors. As we pass down the coast, we find the quaint old towns of Gloucester, Salem, and Marblehead, all of the deepest interest to those interested in our colonial history. Gloucester is the great fishing town of Massachusetts, and its fleets ride the stormy tides of the Atlantic in pursuit of the cod and mackerel to an extent unequaled by

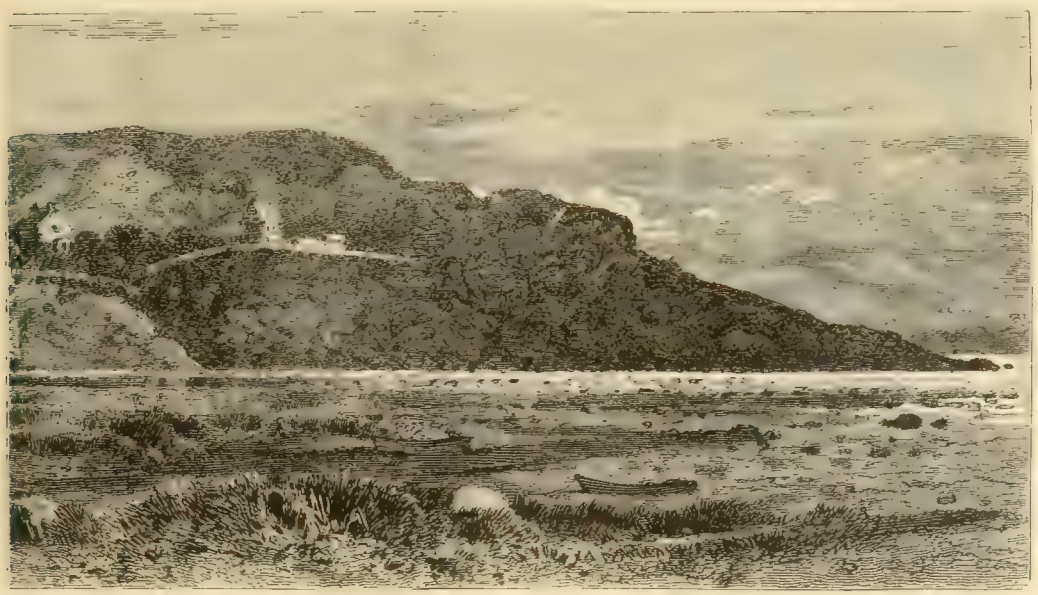


Cedar-Tree at Cape Ann.

any other American town. The harbor is very picturesque, and the town, gradually rising from the wharves, offers an appearance at once venerable and full of the activity of the age. The scenes in the vicinity which curiosity and love of the beautiful have sought out among the rocks and inlets are many and various. One of these is "Norman's Woe," a somber, gloomy mass of rocks, lying just beyond the tree-lined shore, where many a vessel has got its death during the terrible northeast storms which sometimes work such havoc on this coast. Of one of these occasions Longfellow has written, in the "Wreck of the Hesperus":

"And fast through the midnight dark and drear,
Through the whistling sleet and snow,
Like a sheeted ghost the vessel swept
On the reef of Norman's Woe."

A little northeast of Gloucester the promontory of Cape Ann juts into the ocean. Its general appearance is rugged and rocky, with massive granite ledges, many of them overgrown with wild forests. From one of its high hills, called Tompson's



Marblehead.

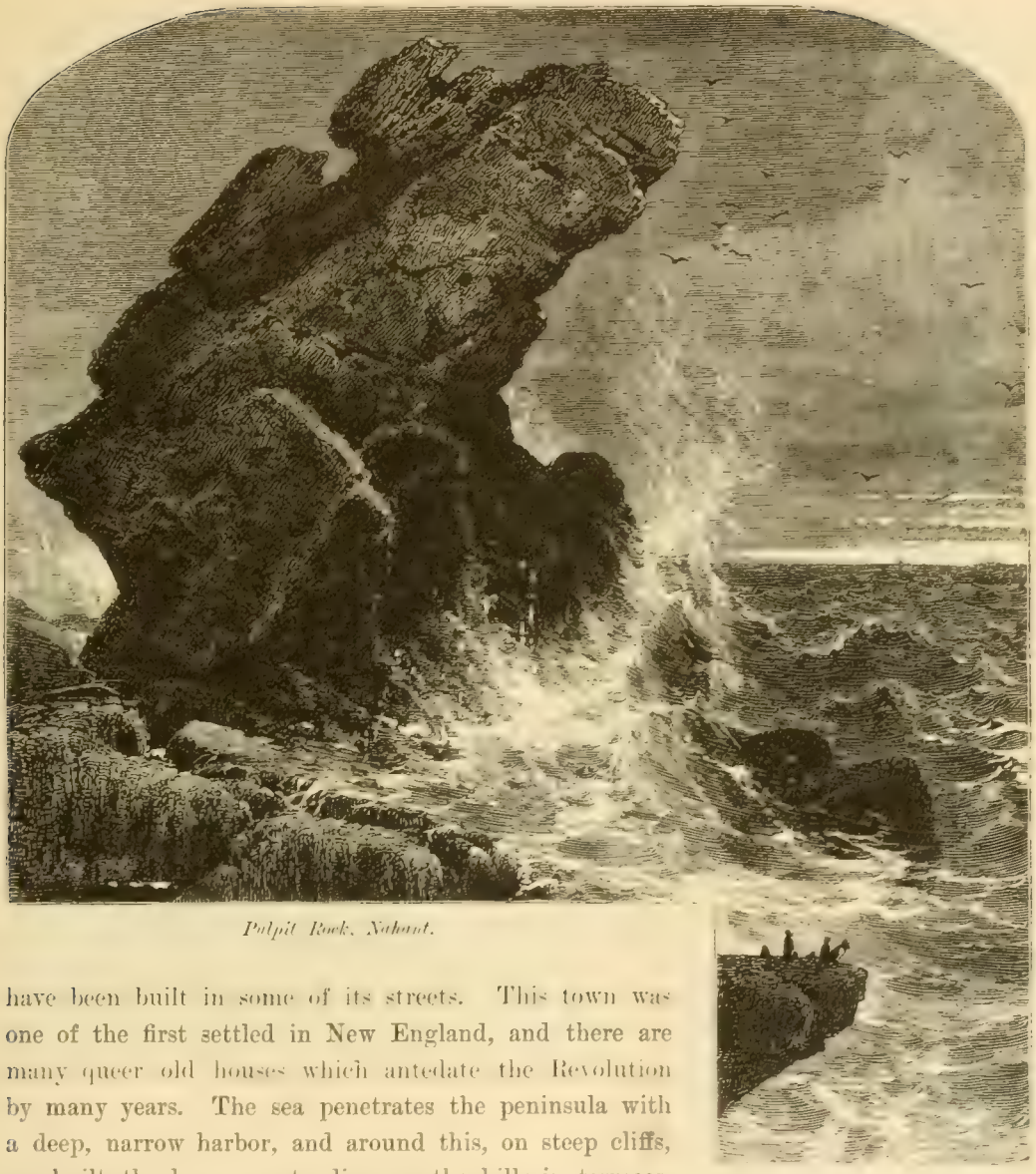
Mountain, one has a noble view of the sea and coast, of Massachusetts Bay and Boston, the shining dome of the State-House looming on the southern horizon, and Mount Monadnock, in New Hampshire, lifting its heavy crown on the northwest. All over Cape Ann are scattered flowery dells and winding brooks, orchards, meadows, and fields of golden grain, with many a picturesque tract of woodland. The outermost shore of Cape Ann presents magnificent ocean vistas, and some curious examples of vegetation struggling for a place on the storm-washed, wind-swept coast. One of

these is a famous cedar-tree, of which we give an illustration. Such a growth is a type of stern struggle and deathless tenacity. Says a writer:

"The feeble plant will for long years scarcely lift its head above the surrounding level, and then only to find itself shadowed by precipices that rise into the very clouds. Throwing out its delicate suckers, it clings to its native barrenness, even more closely for its poverty. The searching winds of a thousand storms straighten its tendrils; the impacted snows of each returning winter scarcely disappear before the summer's heat, ere our cedar is again bound in an icy tomb. But silently, steadily, perseveringly it grows. In time it reaches its head into the noonday sunshine, and its sappy trunk is chafed and gnarled by the ever-recurring hurricane. Sometimes, when the great pines in the perturbed depths of the mountains groan and fall under the hurricane, our cedar clings to its native rock, though lashed as a whip-cord, but still intact. A limb occasionally falls from the effects of these persecutions of the elements, or it is stripped of its feather-like foliage, but the tree struggles on, growing more majestic, more grand, and more as if possessed of a mental history; for there is something suggestive of humanity in its scarred and wrinkled front. On the coast of Cape Ann, under the results of having a comparatively flat surface for display, is a memorable specimen of one of these 'storm-kings' of the vegetable world. It has drawn its substance from the flinty gravel and adamantine rock, and its great, gnarled trunk looks as if it were made of ligatures of brass. The most superficial observer of the grand works of Nature insensibly stops and regards this tree, while the true artist beholds it as an inspiring fact. It is a noble and natural monument of the weird waste it adorns, and a sentinel for observation on the rock-bound coast of New England."

Inside the large peninsula, at the end of which is Cape Ann, are Salem and Marblehead harbors, separated from each other by a neck of land. Seven years after the landing of the Pilgrims the district between the great river called Merrimac and the Charles River was set off as a separate colony, and the capital was fixed at Salem, so named from the "peace which they had and hoped in it." Hoary antiquity is stamped on every part of the old place beyond all other New England towns. The quiet streets are lined with the old-fashioned mansions of the colonial and marine aristocracy; for there was a time when Salem port teemed with lordly East Indiamen, and its warehouses were packed with the richest of fabrics and spices from far-distant lands. Brimful of quaint traditions, almost every house is a museum of curiosities, or else historic in its associations. Here is preserved the original charter granted by Charles I to Massachusetts Bay. Salem was the town of witches, and the tragedies enacted here still invest the town with a somber memory. Witches' Hill, where superstition sacrificed its victims, stands just out of the city.

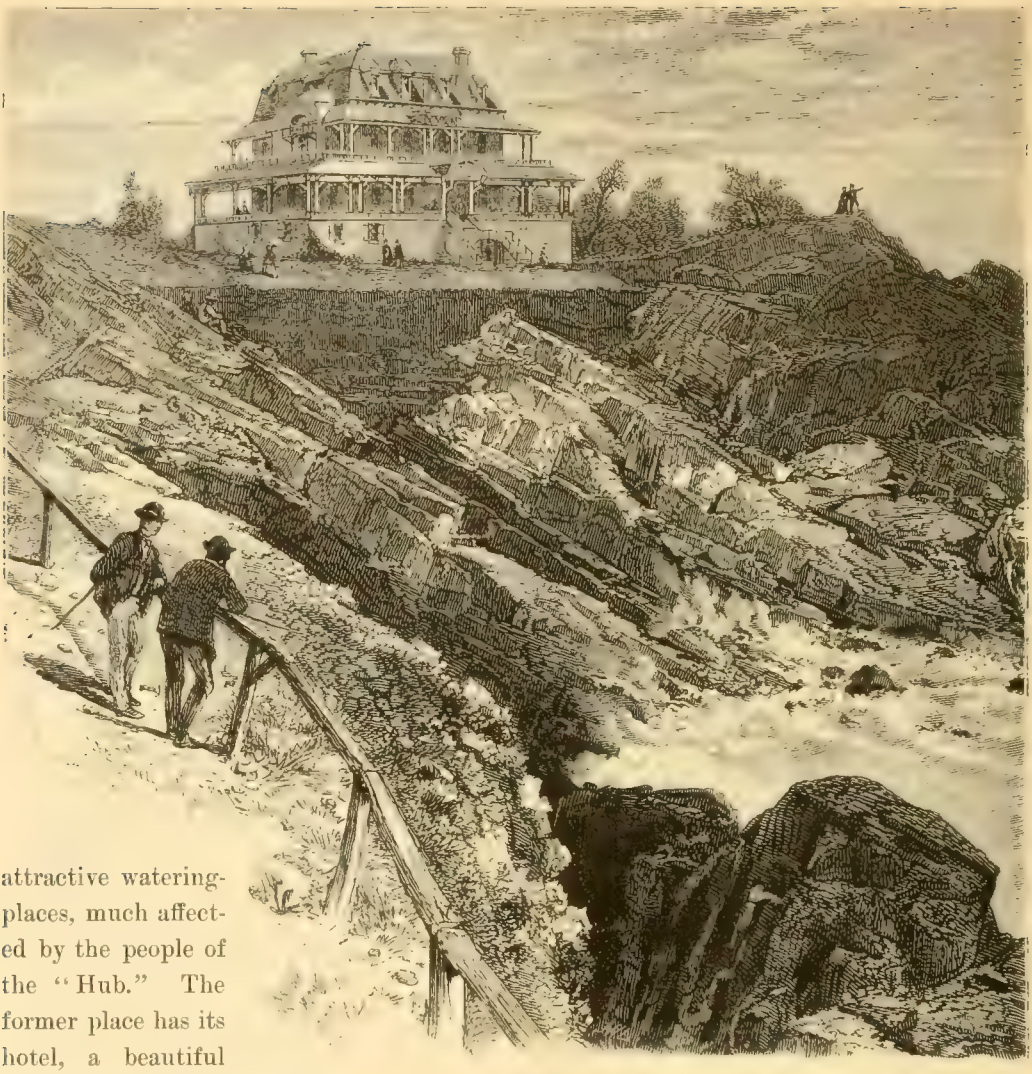
Marblehead, which is close at hand, is but little less interesting than Salem in quaintness and old-time charm. Once a great fishing center, and one of the most important places in New England, it has relapsed into a drowsy, dreamy town, where one would feel transported back a hundred years, were it not for the factories which



Pulpit Rock, Nahant.

have been built in some of its streets. This town was one of the first settled in New England, and there are many queer old houses which antedate the Revolution by many years. The sea penetrates the peninsula with a deep, narrow harbor, and around this, on steep cliffs, are built the houses, extending up the hills in terraces. This town is the scene of Whittier's "Skipper Ireson's Ride," a poem which has made the place more widely known to the people of to-day than any other cause. Many of the early settlers were from the Channel Islands of Great Britain, and the peculiar dialect spoken by the Marbleheaders separates them from all other New England people, even to this day. All these places along the Eastern Shore have become favorite resorts for summer visitors, for, added to the charms of a picturesque sea-coast, and of the ocean itself, are the quaint interests of the olden time, so fascinating to many minds.

Swampscott and Nahant, almost within cannon-shot of the Boston State-House, are

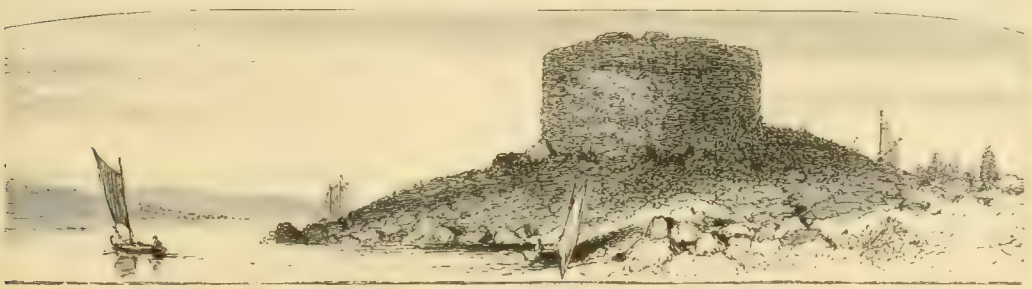


Cottage and Shore at Nahant.

attractive watering-places, much affected by the people of the "Hub." The former place has its hotel, a beautiful stretch of beach, and clusters of fine marine villas, on which art and wealth have been lavishly expended. Nahant probably combines more varieties of marine scenery and general pleasure advantages than any other watering-place on the Massachusetts coast. The peninsula, as it stretches out from the mainland, is at first a narrow neck almost straight. It sweeps in a direct line for some distance, and then curves in a short semicircle round the rocky cliffs beyond which is Swampscott. The narrow neck broadens irregularly with here and there masses of rugged rock, and finally becomes a rocky, uneven eminence, shaped like a horseshoe. Here we find the most wonderful rock-formations, which have been hewed and shaped by the forces of wind and tide, and the prettiest little beaches lying below the jagged and battered cliffs. A writer, describing the rock-hewed beauty

of Nahant, says: "The rocks are torn into such varieties of form, and the beaches are so hard and smooth, that all the beauty of wave-motion and the whole gamut of ocean-eloquence are here offered to eye and ear. All the loveliness and majesty of the ocean are displayed around the jagged and savage-browed cliffs of Nahant." Few places are more charmingly adorned by art and taste. Noble sea-side residences, of brick, stone, and wood, dot the beach and crown the rocky eminences, some shrouded in ivy and other creepers, all having spacious bay-windows, and broad, sheltered piazzas, giving delightful outlooks on the ocean. On the originally bleak peninsula have been made to grow also beautiful lawns, gardens, and flower-parterres.

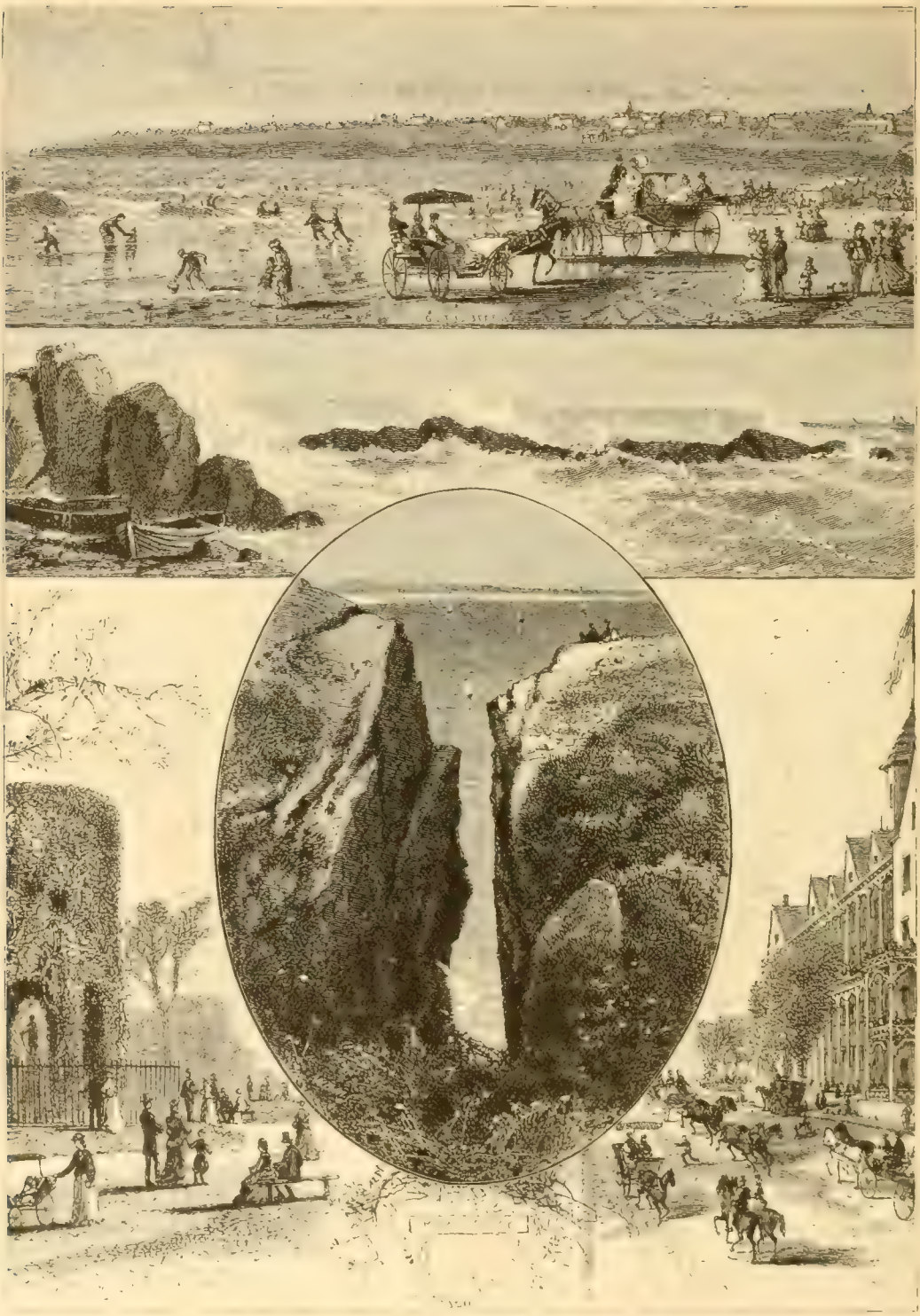
Among the natural wonders which the savage lashing of the waves has wrought out of the Nahant rocks is Pulpit Rock. This is a huge, ragged mass, rising some thirty feet above the water, with roughly square sides, but projecting at the top at an angle of forty-five degrees. The upper part looks like an old-fashioned pulpit, and, if one cares to risk a plunge into the boiling waters, he may, by scrambling up the slippery, dripping sides, find a famous place to muse on the sea—sitting in the midst of its



Old Fort Dumpling

wash and roar. Another notable place is the Swallows' Cave, a gloomy chamber scooped out by the beating of the tides, some eight feet high and seventy feet long. The name is derived from the fact that colonies of swallows used to build their nests in its somber crevices, and flit in and out, an innumerable multitude. But the pleasure-seekers who explore the place in boats have driven out these winged denizens. This cool haunt is a favorite resort on very hot days. Among other rock-wonders are John's Peril, a great, yawning fissure in the rocks; and a huge fortress-shaped cliff called Castle Rock, which bristles with parapets, buttresses, and embrasures, a natural counterpart of the castle-ruins of the Old World. Then there is a wonderful Caldron Cliff, where the water boils and seethes furiously; a Roaring Cavern, which sounds a deep bass monotone; and a noble, natural arch, known as Irene's Grotto. The people of Boston have not far to go to find delightful spots for summer recreation, for, at both Swampscott and Nahant, Nature and art have combined to make sea-side paradises, to which men can go every night from their business in the hot city.

South of Boston are Cohasset, Nantasket, and Scituate, pleasant resorts; but, with-



Scenes at Newport.

out stopping to dwell on these, we will come at once to the imperial watering-place of America, Newport. It will be new to most of our readers that, one hundred years ago, Newport, with the exception of one city, was the most important port in the United States. There were at this time not less than five hundred vessels that cleared from this harbor, carrying twenty-two hundred seamen. She has always continued to wear the purple, for, as her commercial importance gradually fell away before stronger rivals, her social importance increased. Newport became the most unique and delightful of American watering-places, even as she had formerly led New York and Boston in the van of trade. From a far-back period, the center of a proud colonial aristocracy, the gay French officers who came over with Rochambeau and D'Estaing found here the most fascinating society they encountered in America, and the fond regrets with which they left this charming spot are perpetuated in Newport traditions, as well as in very interesting French memoirs.

In the old part of the town are still to be seen many evidences of the former importance of the place. Merchants built splendid mansions by the water-side, with wainscoted walls, mahogany stairways, and tiled fire-places. Gentlemen of wealth and culture had their country-seats in the vicinity of the town, surrounded by flower-gardens, orchards, fish-ponds, charming parks, and other features of rural luxury. The salubrity of the climate, the beauty of the scenery, and the prosperity of the place, attracted the finest elements which make social life delightful.

Fifty years ago Newport was a quiet, torpid place, for then its old prosperity had departed, and the new tide had not set in. Its trade was extinct, the streets were deserted, the wharves had rotted and moldered away, its land was of no value, and its population scarce. Strangers rarely found their way to the old port, and the weather-worn, crumbling relics of a more splendid prime gave but little promise of what was to come. What Newport now is, the world knows. A union of remarkable attractions, equaled by no other watering-place on the continent, has once again drawn a great prosperity to it, based not on commercial traffic, but the needs of recreation and health. The most distinguished people of all professions and from every part of the country; the most brilliant and beautiful women; the representative foreigners who come to America for business or pleasure—all gather here every summer, and give Newport a social aspect of the highest charm. While the spacious hotels are crowded with visitors, it is in the cottage-life of Newport that its distinctive character exists. Houses of every description and in every style of architecture, from the modest and pretty cottage to palaces that cost many hundred thousands of dollars, line the spacious avenues, or nestle amid the foliage of the more secluded streets. The finest steamboats in the world land their passengers here, while beautiful yachts and other craft skim over the waters with their snowy sails. Every afternoon Bellevue and other principal avenues are a perfect whirl of superb equipages; and night and morning fine bands of music fill the air with melody. For those who are fashionably inclined, balls, receptions, garden-parties, dinner-parties, etc., etc., given on the most lavish and tasteful scale, fill the passing days with excitement: while, for quieter

souls, unsurpassed scenery and a fine climate open the book of Nature at its pleasantest pages.

It need hardly be said that Newport is in Rhode Island, situated in the southerly part of an island in Narragansett Bay. Frowning over the harbor with its massive and threatening walls, stands Fort Adams, one of the great fortresses of the United States, now the principal torpedo-station of the country. This is a favorite resort of Newporters, and a throng of fine equipages dashes into the parade-ground every afternoon to witness the ceremony of dress-parade. Opposite Fort Adams, on the other



The Drive.

side of the harbor, is a small, dismantled, but picturesque fort, called Dumpling, which played some part in Revolutionary scenes, but which now is only an agreeable resort for pleasure-parties and picnics.

Brenton's Cove, one of the striking spots of the Newport shore, is approached by a causeway leading to Fort Adams, and gives a splendid view of Newport. The tall and delicate towers of the churches cut sharp against the blue sky; the public buildings stand out in noble relief; and the line of houses, as they rise one above another on the hill-side, is broken by open grounds and clusters of shade-trees. Each spot on

which the eye may chance to rest recalls some event that happened there in early times. Not far away are the remains of the house built by Governor William Brenton, the grounds of which were in his day adorned with rare and costly plants, gravel-walks, groves, and bowers, and all that wealth and a refined taste could fur-



The Walk on the Cliff.

nish. Brenton's Cove and reef, in good weather, are as placid and serene as possible; but, when the heavy breakers dash in on this fatal spot, it is a place of terror. Here many a good ship has been wrecked, and many a dead man washed ashore by the cruel waves. The moldering grave-stones all along the shore are humble records of

the dire tragedies, the woful death-struggles which have been transacted within a stone's-throw of the smiling and beautiful shore, where gay crowds drive by every pleasant summer afternoon.

Following along the southern shore, we come to what is called the Spouting Cave, where, after a southeasterly storm, there is a good exhibition of marine water-works. The construction of the cavern beneath the rocks is such that, when it is nearly filled up, and a heavy wave comes rolling in, the imprisoned waters can find no relief except by pouring through a sort of funnel into the air. It is not easy to tell when the treacherous horn intends to blow, and anxious visitors are often wet to the skin by a swift gush of the water forty or fifty feet in the air. But the ocean-view here is so grand after a storm, that people are tempted to linger in spite of the spouting-horn always lying in ambush for a victim.

Beyond the beach, where hundreds of bathers may be seen enjoying the surf on a summer's day, is the rocky precipice cleft through and through by a great fissure, known as Purgatory, and just beyond this a pleasant spot shaded by trees, and commanding a beautiful view, called Paradise. So the stranger is informed that, to reach Paradise, he must pass Purgatory. The opening extends one hundred and sixty feet, and is fifty feet deep, with a varying width of from eight to fourteen feet at the top. Among the legends connected with this place is that of an Indian woman who, in the early days of the white settlements, killed a colonist for some affront. Walking one day near Purgatory she was accosted by a person appearing to be an Englishman, who proposed to fight with her. The plucky and athletic squaw was not unwilling, and in the struggle she was gradually pulled to the verge of the cliff, when her opponent seized her in his arms and plunged into the abyss below. The cloven-foot appeared at this moment, and the stranger revealed himself in his true person as Satan. The prints of the demon's feet and the marks of blood are still visible on the stones (so it is asserted). Another more credible legend is that of a beautiful but vain young heiress, who was walking on these rocks with her lover, who was pleading his suit with desperate earnestness. The giddy fair one, wishing to test the extent of his passion, said, "I will marry you, if you will prove to me the extremity of your devotion, and your readiness to obey all my wishes, by leaping over this chasm." Unhesitatingly he made the dangerous leap, and then, politely raising his hat, complimented her on her beauty, told her what he thought of her character, and left her for ever. After this the girl, who really loved the man whose esteem she had forfeited, remained in mourning for him all her days. So goes the tale.

Berkeley's Seat, within easy walking distance of the house once occupied by one of the most famous of the English philosophers, is also a favorite resort for Newport visitors. The sheltered opening in Paradise Rocks, now honored by Bishop Berkeley's name, was fitted up with chairs and a table, and was said to have been the place where he wrote one of his celebrated books. Here, with the mighty roll of the waves on the beach and the glorious prospect before him, he might well have been inspired to his greatest thoughts. Those who now occupy Berkeley's Seat during the long, deli-

cious summer days, probably discuss more romantic and sentimental themes than the non-existence of matter.

Such are a few of the noted spots on the coast in and near Newport; but, everywhere one's steps go, the eye is delighted by picturesque groves and rocks and sandy beaches, superb drives, and walks of charm almost unequaled. Probably in the course of a few years every available spot on the circuitous sea-line near Newport will be the site of a splendid cottage, adorned with every resource of art and taste which wealth can command.

No one who has been in Newport has ever failed to be deeply interested in the mysterious ruin known as the Old Stone Mill. This interesting structure dates back



A Newport Cottage.

to the prehistoric times of the colony. There is no record of its having been built by any one, and its resemblance to some of the ancient stone buildings existing in Norway and Denmark has given rise to the tradition that it is a relic of those ancient Norse sea-rovers who are known to have visited this coast in early times, long before Columbus discovered the New World. One theory is, that the old mill was originally a portion of a temple; another, that it was built as a tower of defense, and that, after the walls had crumbled until they were reduced to their present height, a wooden mill was erected on the summit. It was of this tower that the poet Longfellow wrote when he sang of "the Viking old," who found his way from the "wild



Newport Pier.

Baltic strand" to our strange shores, and built here the "lofty tower" by the sea:

"Thus weeks we westward bore,
And, when the storm was o'er,
Cloud-like we saw the shore
Stretching to leeward;
There for my lady's bower
Built I the lofty tower,
Which, to this very hour,
Stands looking seaward."

Probably this ancient stone mill was, in reality, built by the earliest Puritan colonists for the purpose of grinding their corn, a use to which it has been put in more recent times. It was likewise devoted to the storing of gunpowder in Revolutionary times, and was doubtless made useful in a variety of ways. It is unpleasant to give up the more romantic explanation of a Norse origin. The residents of Newport cling fondly to the notion which links the place to the exploits of the Scandinavian sea-rovers of old, and it is unfortunate that the more prosaic is by far the more probable theory.

The first authentic notice of the edifice is found in the will of a Mr. Benedict Arnold, dated 1677, in which he bequeaths his stone-built windmill to his heirs. It is singular that such a strongly-built mill should have been put up, but it is more than probable that it was designed also as a fort in time

of danger, and its appearance would be likely to impress the Indians as such in any event. The various traditions give this old relic a peculiar interest, and it is likely to endure for many generations, unless destroyed by lightning or an earthquake. Close by the old stone mill, on the other side of the square, stands the statue of Commodore Perry, erected by his son-in-law, Mr. Belmont, of New York. The material is bronze, and, as a work of art, it stands high among similar memorial statues in our country.

The streets of the old town of Newport continue largely as they always were, narrow, and lined with quaint old wooden structures, and all the old historic features will probably remain for a good while to come. So, also, the natural features of the region will remain unaltered. But, what marvelous changes the hand of wealth and taste has already made, and what equally striking changes will be made in the future, probably in the direction of improvement and ornamentation! The same rocks frown on the sea; the same purple haze rests on the harbor at sunset; the same ocean-mist tempers the noontide brightness; and the same turbulent breakers or gentle ripples roll upon the beach. But the hand of man has, within the last twenty years, transformed miles on miles of barren pasture into lawns, and parterres, and verdant groves, and millions of dollars have been expended in building splendid villas and stately palaces. The tide of wealthy population has poured in like a flood. Probably, in the not distant future, the summer population will spread over the whole southern portion of the island, and by-and-by the entire area will become a perfect garden of beauty. Newport, now the most delightful and aristocratic of our sea-side summer haunts, can hardly fail to go on growing in wealth and importance, for climate, natural beauty, and the bias of fashion, all combine to make it what it is, and give it promise of something even better.

A younger but growing rival of Newport is found at Narragansett Pier, which is situated on the open ocean just around the western border of Narragansett Bay. Here the broad Atlantic rolls in full force, and there is no land that can be approached in an easterly direction till we reach the coast of Spain. The structure from which the region takes its name, and the ruins of which may still be seen, was erected a few years ago, at considerable cost, of heavy blocks of granite clamped together with iron bolts. The curve of the wall made a small harbor, within which vessels could lie safely and discharge their cargoes. A few great storms demolished this work of man, and now the huge stones are a pile of ruins.

A quarter of a century since Narragansett Pier was a waste dotted with a few fishermen's cottages. Now a thousand bathers may be seen on a warm summer day crowding the beach once so solitary, and eighteen hotels and boarding-houses, some of them vast and costly structures, have been erected on the shore. People from all parts of the country flock hitherward to breathe the cool ocean air, to plunge in the invigorating brine, and watch the grand breakers that dash against the rocks. Artists say there are no rocks on our coast so rich and varied in their coloring until you reach the Florida reefs.

If Newport is the most aristocratic of ocean resorts, we shall find Coney Island no less noticeable and unique as the most democratic of watering-places. A few years ago this sea-side outlet of New York City was a barren waste of sand, with a few low taverns, given up to the orgies of disreputable people. It is now crowded with magnificent hotels and all those attractions which make the sea-side delightful for a summer day's visit. Of its kind there is no watering-place in the world which has so many individual fascinations as the Coney Island of to-day.

Coney Island is the extreme western end of a great outlying bar of sand, broken by inlets, extending along the coast for miles, other sections being known as Rockaway, Long, Jones, Oak Island, and Great South Beaches. On the east, Coney Island runs out to a sharp point, and it has the broad Atlantic for its southern boundary. From the Battery, in New York City, to the wharf at the western end of the island, is eight and a half miles in a bee-line. Previous to 1875 this fine stretch of sea-beach, its splendid surf-bathing, and its convenient location with reference to access from New York and Brooklyn, presented no attractions except to the lowest classes. There was a small hotel at the western end of the island, to which two steamboats made daily trips, and another at the end of the Coney Island road, to which driving-parties from Brooklyn sometimes came. The wonderful facilities of the beach for sea-bathing and the enjoyment of the ocean-breezes were absolutely surrendered to the rough and dissolute, who turned the beautiful beach into a pandemonium.

In 1874 a steam-road from Twentieth Street, Brooklyn, was built by an enterprising capitalist to what is now known as West Brighton Beach, and a large pavilion and restaurant were erected at its terminus. The result proved that the enterprise necessary to afford a convenient means of reaching the island was all that was necessary to secure for the place the position to which its location and natural advantages entitled it, as the most popular watering-place in this country. At the present time, eight steam-railways, one line of street-cars, and nine lines of steamboats, capable of transporting at least one hundred and fifty thousand persons to and from the beach daily, are in operation. The beach itself is covered with light and airy buildings of all sizes and for every conceivable purpose, and during the season the sands are black with people daily. Three of the hotels are among the finest of their kind in the world, and a number of others are fully equal to the best hotels at other watering-places. The island is now divided into four parts, known as the West End, or Norton's Point, West Brighton, Brighton Beach, and Manhattan Beach. Beginning at the West End, or Norton's, the island has been but little improved. The beach is covered with the refuse thrown up by the tides, and the surface of the island is covered with irregular hummocks of fine white sand, and an occasional growth of beach-grass and laurel. The hotel here is an old, low, wooden building, back from the shore, and a wooden path leads down to a large pavilion, where accommodations are provided for parties with lunch-baskets. Between this spot and West Brighton Beach there are fourteen small hotels and pavilions. West Brighton Beach is suggestive of a huge fair-ground. There is a broad plaza in the center, with green grass and



Scenes at Coney Island.



Scenes at Coney Island.

flowers, traversed with wide modern pavements; and there are several other very decent hotels clustered about. Every afternoon and evening a band plays at the pavilion near by, and the scene at night is illuminated by the brilliant rays of the electric light. A *camera-obscura* gives excellent views of the beach, which are well worth seeing; and an observatory, three hundred feet high, the top of which is reached by large elevators, affords a splendid outlook over the island, the bay, and the adjacent cities.

One of the most striking features of this part of the island is the pier, one thousand feet long, built of tubular iron piles, which runs out a thousand feet into the sea. On it are three two-story buildings containing saloons, restaurants, and promenades, twelve hundred bath-rooms, and stairways leading down into the water from the pier. Steamboats from New York land at this pier nearly every hour all day.

A wide drive and promenade about half a mile long lead to Brighton Beach on the east. Park wagons are continually passing to and fro to convey those too tired or too lazy to walk. From a point about half-way between the two latter-named beaches, an elevated railway will run to Locust Grove, connecting there with steamboats from New York. Brighton Beach is one of the pleasantest parts of the island, and is a favorite resort of Brooklyn people.

From this part of the island the grounds of Manhattan Beach extend two and a half miles eastward. The hotels at both Brighton and Manhattan Beaches are among the largest of their kind in the world, and very handsomely furnished. These great summer caravansaries are able to feed from twenty to thirty thousand people a day each, and it is a curious sight to watch the crowds of hungry visitors thronging the dining-rooms and piazzas. In front of the hotels large and splendid orchestras play during the afternoon and evening, and the grounds are prettily laid out with walks, grass, and flowers. An immense gathering may always be seen in front of the hotels listening to the music, which is of the finest, chatting, laughing, flirting, and otherwise enjoying a delightful open-air concert, with its joyous surroundings. Many of the visitors bring their own luncheon, or buy it in one of the numerous restaurants, and enjoy it picnic fashion on the sands.

The bathing accommodations at Coney Island are of the most extensive sort. Those at Manhattan Beach, for example, have twenty-seven hundred separate rooms, and are in all respects convenient and well arranged. The beach in front is fenced in and rigidly preserved for bathers. Large floats beyond the breakers afford resting and diving places for expert swimmers, and life-boats patrol the beach at the same point. An amphitheatre seating two thousand people overlooks the bathing-grounds.

Still farther eastward is another magnificent hotel, the Oriental, built by the Manhattan Beach Company for the use of permanent guests and families desirous of escaping the noise, confusion, and variety of the throngs which make the most characteristic feature of the place.

From this sketch it may be fancied that Coney Island is a most unique and picturesque place. Within an hour's journey of New York, it furnishes thousands of

people, who can not leave the city during the summer months, except for a very brief period, a chance for sea-side diversion, bathing, and fresh air, while every resource known, which can gratify the most epicurean tastes, offers its seductions for the more fastidious public. Indeed, many families formerly in the habit of going to more distant points have of late adopted Coney Island as their summer home, enabling the men to go in and out to their business. This, however, is only an incidental feature of Coney Island life. It is from the great throng of daily pleasure-seekers, made up of all classes, that the place gains its peculiar picturesqueness and animation. The whole length of the beach, on a bright summer's day, is a never-ending procession of people, from men and women of the highest social rank and position to humble mechanics and laborers, out for a day's airing with their families. The contrasts of life and character resulting from this heterogeneous assembly give Coney Island its greatest charm, aside from the sea, air, and sunlight.

Other well-known watering-places by the ocean are, Long Branch, Atlantic City, and Cape May, all popular resorts and possessed of many attractions, but having no special value or significance as derived from scenery, tradition, or peculiar social conditions, such as make places like Mount Desert, Isles of Shoals, Nahant, Newport, and even Coney Island, peculiarly noticeable.



The Drive at Long Branch.



Catskill Mountain-House.

OUR INLAND PLEASURE-PLACES.

Among the Catskills—Saratoga and its life—Lake George and Lake Champlain—Lake Memphremagog—The White Mountains—Trenton Falls—The lakes of Central New York—Watkins Glen—Niagara Falls—The beauties of the Thousand Islands—The Saguenay River—Minor watering-places of the interior—Put-in-Bay—Lake Erie.

It is not necessary to go more than half a day's journey from the city of New York to find a delightful mountain-region full of varied attractions and picturesque aspects. As you sail up the Hudson, about one hundred and forty miles from the sea, you see the thick cluster of mountains to which the Dutch settlers gave the name of the Catskills, only about eight miles away from the bank of the river. They

make a short, broken spur, thrown out eastwardly from that great mountain-chain which, under various names, stretches from Nova Scotia to Georgia and Tennessee, all being known under the general title of the Appalachian. The Catskills are like an advanced bastion of this great rocky wall, that stretches for nearly two thousand miles. On the western side they slope gradually down toward the central part of the State of New York, breaking up into innumerable spurs and ridges. On the eastern side they rise abruptly to a height of more than four thousand feet, looking from the river like a huge fist, the mountains representing the knuckles, and the glens and cloves the spaces between them. Isolated from other mountains, they overlook a great range of country, and the sweep of vision which the traveler gets is such as is rarely attained from higher elevations. The Catskills are famous, not only for this bird's-eye view, but contain some of the most charming bits of mountain-scenery in the world. These nooks of rock and forest beauty have been immortalized by Cooper, Irving, and Bryant, and have inspired our landscape artists to do much of their finest work.

As we approach the little village of Catskill, on the western bank of the river, we see a series of tree-covered ridges, rolling away, one after another, eight or ten miles, and, beyond the farthest, lifting their peaks up into the clouds, are the Catskills. Yonder, to the right, we see Black Head; then, in succession, North Mountain, South Mountain, and Round Top, with High Peak towering over all. Between the last and South Mountain we observe a sharp notch or depression: this is the celebrated Clove, through which the Cauterskill comes tumbling and roaring downward. High on the face of South Mountain, or rather between it and its northern neighbor, the eye, by looking very keenly, sees a small speck, hanging like a swallow's nest to a wall. If we look through a pair of good glasses, you will see that it is a spacious hotel, and that on its piazzas are gathered perhaps several hundred human beings, looking out over the magnificent landscape, which spreads like a map below them, and watching the thread of silver that gleams occasionally in the far distance, marking the course of the Hudson.

On leaving the village of Catskill, we are borne away in lumbering old stages, and speedily cross the bridge which spans the mouth of the Cauterskill. We are now fairly on the road to the mountains. For a while we pass by meadows, where the cows graze peacefully, or hay-fields which send up a delicious fresh scent. The valley rolls gradually up to the base of the mountains, which rise in the distance like a wall. Soon the scarred head of the North Mountain comes into view, and the Mountain-House is clearly defined against a background of pines.

Mountain-climbing is much the same everywhere, but in the Catskills it has peculiar charms. Of course, the road is often rough and fatiguing, the tax on the muscles severe, but there are frequent convenient resting-places and views of entrancing loveliness, as well as the most picturesque nooks. The route taken by the stages to the Mountain-House winds around and upward over a road full of beauty. Here a gorge, there a water-fall, arched colonnades of forest, steep escarpments of cliff,

wide vistas of valley and lowland stretching far away, succeed one another rapidly. Now you pass along the edge of a dizzy precipice, now you plunge into deep, umbrageous woods, which look as if they might have been undisturbed from the very creation. Winding around the side of North Mountain you suddenly come to a place where you see the Mountain-House apparently not more than half a mile away. Perched on a shelf of rock, which juts out far over the side of the mountain, glistening white against the pine-clad shoulders of the mountain, the pile of buildings



View of the Catskills.

makes a singular feature of the view. On the left of the picture we see the opening of the Cauterskill Clove, between the sloping side of the South Mountain and that of the more distant high peak, and, above the clouds, floating like fringes of gauze about the mountain-sides, we stand and look on the valley of the Hudson, fading toward the distant south.

A steady climb of three miles brings us to the plateau on which the hotel stands, built on a flat rock on the very edge of the precipice. The cliff here falls perpendicularly about eighteen hundred feet. The view from the piazza is wonderful. Ridges of hills which rise nearly a thousand feet in height are dwarfed into nothingness, and the country through which we have ridden up from the river looks almost as flat as a table. Through the course of the distant plain the silvery Hudson winds from the hills below Albany, on the north, to where the glittering ribbon disappears on the south, behind the highlands at West Point.

Directly beneath us we see the lovely valley, dotted with farms and clumps of woodland, smiling in the sunlight, with waves of shadow chasing one another across the green. Beyond, an amphitheatre of mountains rises on the eastern horizon, stretching in broken lines from the southern boundaries of Vermont to Northern Connecticut, rolling off peak after peak, wave after wave, of deepening blue, till they are lost in the purple of the Berkshire Hills.



Scenes at Saratoga.

Such is the view which delights the eye from one of the higher points of the Catskills, and similar prospects may be had from many a point. Hotels and boarding-houses, of various degrees of excellence, are scattered throughout the mountains, and in the summer season are crowded with visitors, come to enjoy the crisp, pure mountain air, and the beauties so lavishly scattered by the hand of Nature. Picnic-parties, walking-parties, pedestrians, single and in groups, and riding-parties, we find scattered through these breezy heights and umbrageous forests at every turn. The nearness of the Catskills to New York and the economy with which the mountain-trip may be made make this beautiful spur of our great coast-range a favorite spot, and it may be observed that those who frequent the Catskills appear to care little for the behests of fashion, but to give themselves up wholly to the delights of out-door life and the pure, sweet recreations of Nature. In another chapter of this book the reader will find a more extended mention of special features of Catskill scenery.

If the Catskills are noticeable as a summer resort for the easy-going, unconventional lives of the pilgrims in search of health and rest, we find the opposite extreme at Saratoga, one of the famous watering-places of the world. Here fashion, wealth, and extravagance reign supreme, and all the glitter and show of social life make the summer months a whirl of gayety and dissipation. Probably at no watering-place in the world is there more brilliancy than at this spa. Aside from the element of fashion and social excitement so noticeable at Saratoga, the salubrity of the air and medicinal value of the waters contribute to attract many of the most distinguished families in the country. One constantly meets men eminent in literature, politics, science, and art, who come together yearly here, as if at a great club, by common consent, and who, though not mingling in the excitements of gay life, love to watch the sparkling throng. The finest hotels in the world are found at Saratoga, and it is here that visitors generally stay. Cottage-life, which constitutes the prominent fact in Newport society, is scarcely known at Saratoga, or, at most, contributes but little to the leading characteristics of the place.

Saratoga is located about thirty-two miles northwest of Albany, and has a permanent population of not less than fifteen thousand, which is doubled in the summer months. There are in the town twenty-eight mineral springs, of which six are spouting ones, some chalybeate, others impregnated with iodine, iron, sulphur, and magnesia, and all powerfully charged with carbonic-acid gas. The most celebrated of the springs are the Congress, Empire, Hathorn, High Rock, Geyser, Washington, and Pavilion. Large quantities of the waters are bottled and sent to all portions of the country.

The medicinal properties of the Saratoga springs were known to the Indians in very early times, at least as far back as Jacques Cartier's visit to the St. Lawrence in 1535. In 1767 Sir William Johnson was carried hither on a litter by his Indian retainers, and it is believed that he was the first white man to visit the springs. The first log-cabin was built in 1773, by Derick Scowton, and the first farm-house in 1784, by General Schuyler. In 1693 a sanguinary battle was fought between the

French and English at this point, in which the English were completely victorious. In fact, all the country about Saratoga was "bloody ground," as it was here that the French and English disputed supremacy most fiercely, and all the atrocities of Indian savagery were shown at their worst. It was here also, though not exactly on the present site of the town, that the battle of Saratoga, the turning-point of the Revolutionary contest, was fought and won by the Americans. The name Saratoga is derived from an Indian word which means "the place of the herrings," which formerly passed up the Hudson into Saratoga Lake.

The city of Saratoga is splendidly built on two or three of its main streets, of which Broadway is the chief, with hotels, banks, and other public buildings, and all of the thoroughfares have a delightful rural aspect, in spite of the brilliant concourse of carriages and massive structures, from fine elm-trees which shade the streets. There are not many natural attractions of scenery, though parts of the lake, which is little more than three miles east of the town, and is connected with the Hudson River by a creek, are quite picturesque. Several fine country-houses, one or two of them among the most costly and elegant in the land, have been built here. But it is not to see picturesque scenery that the summer pilgrims who frequent Saratoga have in view. It is rather to witness or take part in the unceasing and brilliant gayety of a social life which, for activity and extravagance, is only equaled by that of Newport among summer places, and that of New York during the winter months. To this must be added a certain proportion moved by considerations of health, or attracted by the habits of many years' standing. It is probable that the average number of summer visitors at this favorite place nearly approaches fifty thousand, though but a small number of them spend the whole season.

Leaving the fashionable gayeties of Saratoga, a journey of a little more than thirty miles in a northeasterly direction brings us to a region of such picturesque charm and loveliness as to be almost without a peer—the shores of Lake George, famous historically, famous for natural beauty, and one of the best-known resorts to tourists and pleasure-seekers. The Indians gave the name of Horicon to this most beautiful of American lakes, the word meaning "silver-water," a title well applied on account of the pellucid clearness of the water. The early French explorers, struck with the same characteristic, called the lake "St. Sacrement," and so highly prized its water that they actually sent it to Montreal for baptismal uses.

Lake George is located in Warren County, about sixty miles directly north of Albany. It is thirty-four miles long, from one to four miles in width, and is said to be at places nearly four hundred feet deep. In shape it is long and narrow, and flows into Lake Champlain by a narrow rivulet, at the northern end, about four miles long. Lake George is dotted with many small islands—one, it is said, for every day of the year—and the shores lift themselves in bold highlands. The lake is literally embowered among the hills, a brilliant mirror set in among cliffs and wooded mountains, the rugged sides of which see themselves reflected in the clear and silent bosom of the waters.

The tourist approaches Lake George by the Saratoga Railway as far as Glens Falls; thence the journey is made by that most delightful method of travel in picturesque regions, the stage-coach. The first glimpse of the lake is had as the coach approaches Caldwell, its terminus. Suddenly the Fort William Henry Hotel, built on the ruins of the famous old fort, comes in view, and the stage dashes into the grounds up before the wide piazza thronged with people. On one side of the traveler all is vivid life and animation; on the other, a marvelous stretch of lake, mountain, island,



Scenes at Lake George.

wooded shore—such a picture in charm, brightness, and fullness, as rarely delights the eye of the tourist. One may linger many days at Caldwell enjoying the changing beauties of the scenery. From the top of Prospect Mountain, on the southern border of the lake, to which a good road ascends from Caldwell, a glorious picture of the whole region is spread before the spectator.

There are several ways of enjoying the scenery of Lake George. A steamboat makes a daily trip to its northern end, thirty-four miles away, returning the same day. One may also hire a steam-launch for an independent exploration, or make the



Lake George, from Glens Falls Road.

entire circuit of the shore in a sail- or row-boat. There can be no more charming excursion than a sail around this American Como, as it has frequently been called. The rugged shores, the beautiful little bays, the picturesque islands, the soft glamour of the waters, the towering mountains, make a delightful panorama. One may camp out at night on island or headland, and thus add vastly to the relish of the excursion. Camping-parties are very justly in vogue at Lake George.

Let us now take the steamer which daily traverses the length of "Silon Water," and start on our voyage down the lake. We pass island after island of the quaintest charm, on many of which we observe handsome villas or perhaps the tents of a camping-out party. At what is called the Narrows the course of the lake is shut in by projecting points of land, the contracted watery strait being crowded again with islands, on one of which is a fine hotel. A winding sail among these wooded islets is delightful. On the east shore we see Black Mountain, the highest of the peaks that line the lake. Densely wooded at the base, the mountain stands out rocky and bare at its summit of nearly three thousand feet. The view from the summit, as-

cent to which is laborious, is magnificent. Beyond Black Mountain are its brethren, Sugar-loaf and Buck Mountains. The next place of importance is Sabbath-day Point, a tongue of land which juts out from a tall, precipitous hill, just beyond which is another hill of corresponding height. Here, as at so many other points on the lake, the view is grand. Beyond this again we find Anthony's Nose, a bold, high hill; and Rogers's Slide, a cliff on the lake-side, which gets its name from the tradition of the exploit of a bold hunter, who made a daring escape from the Indians at the time of the old French wars.

Thus sailing by the most varied background of mountains and cliffs, amid charming islands, and over transparent waters, we finally reach the northern end of the lake. From the steamboat-landing a stage conducts us to Ticonderoga, on Lake Champlain, four miles away. The waters of Lake George flow through a narrow channel, and midway on their way to Champlain tumble down a rocky descent in a very picturesque fall.

Lake George is made interesting by history and legend, as well as by its superlative beauty of scenery. Our great novelist, Cooper, peopled it with the creations of his genius, and the names of Hawkeye, Chin-gach-cook, Uncas, and of Alice and Cora Munro, remain associated with it in the minds of all lovers of American literature. Legends of daring heroism in the old colonial wars belong to every island and headland, and it was here that some of the most important ante-Revolutionary events in our history took place. Lake George first came into conspicuous notice during the French war of 1745, though it had been discovered and explored as far back as 1646. During the first-named year, it became the great highway between the North and the places southward, and armies tramped back and forth, or met in fierce conflict on its shores, and stained its silvery waters with the blood of battle. It was on this lake that Sir William Johnson, commanding the English forces, met the Baron Dieskau, commanding an army of French and Indians, in 1755, inflicting a bloody repulse on the enemy. Scouting-parties at this period, from both sides, ranged up and down the lake, and came together in endless collisions, which were full of romantic incidents. Among these bold scouts was Israel Putnam, whose after-career became so notable. In 1757 occurred the massacre at Fort William Henry, which gave Fenimore Cooper material for one of the most thrilling scenes in his romance, "The Last of the Mohicans." Colonel Munro commanded at Fort William Henry, and here he was besieged by the Marquis Montcalm, at the head of an overwhelming force of French and Indians. The English held out gallantly till forced by starvation to surrender, the conditions being that they should march out with the honors of war. But the Indian allies of the victor were uncontrollable, and a horrible massacre ensued, leaving a dark stain on the otherwise white escutcheon of Montcalm, which his heroic death, on the Plains of Abraham a few years afterward, hardly effaced. Two more English expeditions speedily ensued, the latter of which was successful in capturing the French forts on Lake Champlain, and freeing the colonies permanently from the fear of French invasion. Later, during the Revolutionary contest, this region became the theatre of stirring scenes in the Burgoyne invasion.



Lake Champlain, from Fort Ticonderoga.

A ride of four miles from the head of Lake George lands us at Ticonderoga, on Lake Champlain. The fort still remains, a most picturesque old ruin, and has been left unmolested except by the hand of Time. Few places in America have had so many romantic associations, or undergone so many vicissitudes of war. After being the center of many striking events prior to the cession of Canada in 1763, it became again invested with historic importance at the breaking out of the Revolution in 1775, when it fell into the hands of the Americans under the eccentric leader Colonel Ethan Allen. It again passed into the hands of the British, where it remained till the surrender of General Burgoyne at Saratoga. Lake Champlain was also the arena of one of the most brilliant naval feats of the War of 1812—the defeat and capture of a British fleet by Commodore McDonough.

Between Lakes George and Champlain there is a striking difference, though each is very beautiful in its way. The former, full of exquisite sylvan charms and almost

dainty in its loveliness, is embowered by steep, overhanging hills, which are reflected in the clear, shining waters. On Lake Champlain the vision takes in mountain-ranges stretching far away to the right and left, with large areas of beautiful meadow and farm-lands, smiling with cozy homes, sloping down to the lake. While this noble sheet of water is not so large as to deny the pleasure-voyager views of either shore, it has those sweeping expanses so essential to a really fine water-view. The length is one hundred and twenty-six miles, the width about thirteen. North of Ticonderoga the lake begins to widen, and at Burlington Bay expands into something like a sea.

Above Ticonderoga is Crown Point, which is closely connected in history with the other fort. A few miles below Burlington a spur of the Adirondacks stretches down



Split Rock, Lake Champlain.

to the shore, making the only steep cliffs directly on the water. These cliffs terminate in a point, known as Split Rock, where the rock is cut off by a huge fissure and converted into an island. There is a broad expanse of water at this point, for sixty miles, and at times the waves, under the force of a north wind, come tumbling in with the roar of ocean-surf, and the spray is dashed over the tall light-house. The distant mountain-views from this place are very imposing. On the one side are the Green Mountains, purple in the hazy distance; on the other the Adirondack Hills mingle their blue tops with the clouds. One may see in the distance the highest peaks in Vermont, Mansfield and Camel's Hump, and among the distant Adirondacks the towering top of Whiteface. At Burlington Bay the wide surface of the water is

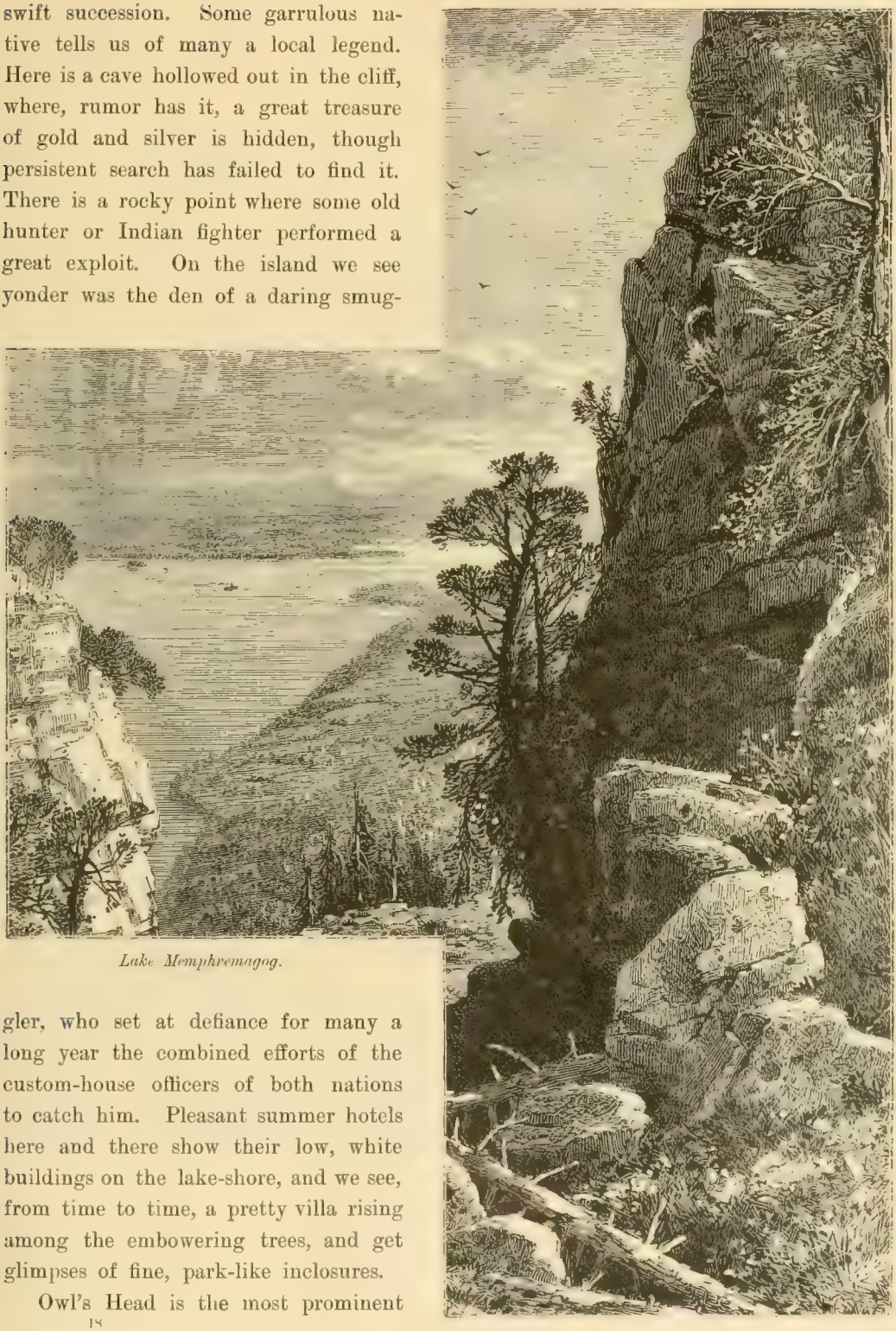
dotted with numerous islands. From Burlington to Plattsburg the shores continue to be of varying character, and full of pleasant surprises. At Plattsburg the lake has its widest reach, though a long island breaks the expanse nearly midway between the two shores. St. Albans is on the eastern shore of the lake, near the northern boundary of Vermont. Rouse's Point is at the extreme western boundary of the lake, and is on the border-line of Canada. From this point the waters of the lake flow into the St. Lawrence by a narrow stream known as Sorel or Richelieu River.

From the day when the American fleet under McDonough and the army under McComb inflicted such defeats on the British, on the waters and shores of Lake Champlain, both battles being fought on the same day, unbroken serenity has rested on this beautiful little inland sea. Fleets of vessels have traversed its waters, but they have been on peaceful errands. Vast armies have sailed up and down its channels, invaded its towns, penetrated the forests, and assaulted the mountains that surround it, but they have beeen armies of pleasure-seekers. Lake George and Lake Champlain will always remain among the most favored goals of summer pilgrimage, for, while their shores and waters are full of the most romantic beauty, the quaint charm of the historic past lingers about them with a gentle twilight glow, full of fascination for a susceptible fancy.

But there is another lovely lake, far up in Northern Vermont, which many enthusiastic tourists declare fully equal to Lake George in beauty. To reach this remote but most charming spot we must cross from the town of St. Albans, which is on the Vermont side of Lake Champlain, to Newport, a town at the foot of Memphremagog. The railway-journey carries us across the Green Mountains, and through scenery of the most picturesque character, which would repay us for the venture if we had not Memphremagog to look forward to. This beautiful expanse of water, with its awkward name, is overshadowed by mountains and bordered by dense forests and grassy meadows. Partly in Canada, partly in Vermont, it is thirty miles long and two miles wide. Deep and narrow, it is gemmed with pretty islands, and in its sparkling waters speckled trout of great size tempt the angler's skill.

The puffy little steamboat, which navigates the placid lake in the interests of pleasure-seekers, transports us by a continual succession of beautiful scenes. Here a narrow cape juts out amid the tossing, shining ripples; there the land forms two bays, with rounded outlines and wooded shores. Here the shore is high and cliff-guarded; there the banks are low and rolling, girt by a belt of yellow sand. The deep water takes every color and form on its mirror-like surface, and reproduces them with the greatest fidelity. Villages on the banks and islands, many of the latter cultivated and inhabited, vary the scene, and lend a sweet human interest to it. Among these are Province Island, a pretty garden of a hundred acres, and Tea-Table Island, which is a great resort for picnic-parties. As we glide past, pleasant laughter and fancifully painted row-boats moored to the little jetty speak of the presence of youth and happiness. When we enter British waters and pass Canadian shores, the scenery does not lessen in picturesqueness and beauty. Islands, promontories, and cliffs pass by in

swift succession. Some garrulous native tells us of many a local legend. Here is a cave hollowed out in the cliff, where, rumor has it, a great treasure of gold and silver is hidden, though persistent search has failed to find it. There is a rocky point where some old hunter or Indian fighter performed a great exploit. On the island we see yonder was the den of a daring smug-



Lake Memphremagog.

gler, who set at defiance for many a long year the combined efforts of the custom-house officers of both nations to catch him. Pleasant summer hotels here and there show their low, white buildings on the lake-shore, and we see, from time to time, a pretty villa rising among the embowering trees, and get glimpses of fine, park-like inclosures.

Owl's Head is the most prominent

mountain on the lake, and is cone-shaped. From a point high up on its rocky side we get a glorious view of the lake and its shores, of distant mountains and plains, of cultivated stretches of farm-lands, of almost trackless forests far away in the distance,



Mount Washington, White Mountains.

and of other shining lakes and rivers. The summit itself is riven into four peaks, deep ravines intervening between them. Once a year a lodge of Freemasons meets here, and on the face of a wall of rock are inscribed some of the mystic symbols of

the order. Other mountains on the lake are almost as imposing. Mount Elephantus, resembling faintly an elephant's back from one point of view, changes into the form of a horseshoe as we go northward; and Mount Oxford, a fine peak, closely resembles Owl's Head in shape.

On Lake Memphremagog, as at most lake-resorts, the mountains only furnish a background for the charming lake-scenery itself, an element of visual pleasure subsidiary to other more attractive features. To enjoy mountain-scenery for its own sake, to fully realize the majesty and strength of these giant forms, which lift their scarred and lightning-riven heads up amid the clouds, we must go to the great mountain-region of New Hampshire, which, in many respects, is the most notable of all the districts of high elevation east of the Mississippi. In treating of our inland summer places, it is not our purpose to enter at any length into the characteristics of White Mountain scenery, but to treat it only with reference to its attractions to the pleasure-tourist. A more detailed sketch of mountain-scenery in New Hampshire will be found under another head. Many fine hotels are scattered through the mountains at the principal points of interest, among which are the Crawford and Glen Houses, commanding the approaches to Mount Washington on opposite sides, the Profile House, the Twin Mountain House, and the Fabyan House. These are only a few of many which offer excellent or luxuriant accommodations to the tourist, as the case may be. The height which stands principally in the public imagination as typical of the White Mountains and White Mountain scenery is Mount Washington, the loftiest peak of the range, and, with the exception of Black Mountain in North Carolina, higher than any other east of the Mississippi; and to this noble mountain we will make a short summer pilgrimage in search of the beautiful.

Choosing among the valleys the one whose picturesque beauty begins the soonest, we find ourselves at the head of Lake Winnepesaukee, with two lofty peaks, Whiteface and Chocorua, towering in the distance. Departing from Centre Harbor, a summer resort of some note, we start by stage-coach for Conway and the mountains, and are soon winding among the high, rugged hills, over the dark, frowning brows of cliffs, through deep ravines, or across a lofty plateau which overlooks the amphitheatre of hills. One watches the great hill-tops come up like billows from out the sea of mountains, the soft purple light resting over them like a thin veil. The balmy fragrance of the resinous woods and of a thousand growing things delight one sense, while the eye is enraptured with the beauty of the mountain-forms. Reaching Conway, we again take stage, after a night's rest, for North Conway, which is on a little plain near the base of Bartlett Mountain, and Mount Kearsarge, about a three hours' ride from Conway. The mountain-scenery at North Conway is peculiar for its loveliness. The curves of a snow-drift and the curl of a sea-wave are spoken of by Ruskin as among the most beautiful lines in Nature, but they are not a whit more beautiful than the curves of the mountain, as seen from the Arcadia of the White Hills. Here Nature seems to have thrown aside her harsh and severe character in the very granite heart of New England, and to have exulted in her most genial mood.

Starting in the morning from North Conway, we wind along the plain till the valley becomes narrow and broken, and the hills abrupt. Passing by the flanks of grand hills, picturesque water-falls, and mountain pools, glimmering through the foliage of the road-side, we soon find ourselves among the towering mountains whose walls fall clear down to the carriage-track. By the middle of the afternoon the steep sides of Mount Crawford bound the way on one side, and, by the time we reach the little hotel under Willey Mountain, the low-down sun makes further journeying for the night undesirable. From the Willey House to the gate of Crawford Notch the path becomes narrower and sterner. The slope of the mountains is very abrupt, and the narrow ravine is almost unbroken for three miles till one has passed the gate of the Notch, an opening hardly wide enough to allow the passage of a team of horses. Just beyond this gate we come to the Crawford House, situated on a little plateau of a few hundred acres.

The ascent of Mount Washington from this point by the bridle-path is more satisfactory than any other, as it affords the finest views of mountain-scenery, and a most exhilarating experience. We start on a sunny morning with thick garments, for we shall find the air keen and nipping before we get to the top. When everything is in readiness, the cavalcade—for we are not alone in the trip—sets off up through the trees, looking, in the motley costumes of the party, like a *troupe* of gypsies as it winds along the shaded path, which ascends two thousand feet during the first two or three miles. The corduroy path that we finally reach is so steep that those just in front appear to be almost overhead. Here and there, tired and thirsty, we stop to quaff the delicious cold nectar of the mountain-springs. As we ascend higher and higher, the birches, maples, ashes, and poplars, give place first to pine, hemlock, spruce, and fir, and finally to a sort of Arctic vegetation, and on the summit of Mount Clinton, which we have been climbing on our way to Mount Washington, we find a region of dead trees as white as ghosts.

As we begin to descend to the narrow ridge, which unites this mountain to the next, we catch a glimpse of a valley two thousand feet deep, at the foot of which flows the Mount Washington River, along the edge of a vast forest. At the left at an equal depth runs the Ammonoosuc, and we get our first vivid notion of mountain-peril when the horses, planting their four feet together, are obliged to jump several feet to the rocks beneath, where a mistake would hurl the horse and rider hundreds of feet down the mountain-side. Passing around the side of Mount Monroe, one gazes into a frightful abyss, known as Bates's Gulf. Clouds and vapor hang against its precipitous sides, and gigantic rocks strew the bottom of the gorge. From Monroe is the first near view of Mount Washington, which rises in a vast cone and shines with bare gray stones fifteen hundred feet higher, across a wide plateau strewed with bowlders. This elevated plain is a mile above the sea, and in the crevices of rocks and patches of soil we see hardy wild-flowers and straggling grass, and here and there a small mountain-tarn. By turning aside a little, we see Tuckerman's Ravine, the most wonderful gorge in the mountains, lying at our feet. Having crossed the plateau, the

last four or five hundred feet are best climbed on foot, for the stones are loose and the ascent perilously steep.

Soon we reach the top of the mountain, and, guarding against the violence of the blast by getting to the leeward of a huge rock, we command a view more extended and exciting than any east of the Rocky Mountains. A sea of heights stretches on every side; the near peaks, bald and scarred, are clothed with forests black and purple, and sloping to the valleys so remote as to appear insignificant. Beyond the



Trenton Falls.

near peaks the more distant mountains, grand and solemn, fall away rapidly into every variety of blue and purple, glittering with lakes, till the eye reaches the sea-line ninety miles away.

On another side of the mountain is the Mount Washington Railroad, which extends from a little village called Marshfield to the summit, the distance being about three miles. The grade is thirty-five hundred and ninety-six feet in three miles, and in places one foot in three. There is a center rail in which fits a cog-wheel, that fairly pulls the train up the mountain, and its safety is secured by self-acting brakes. The time occupied in ascending is about an hour and a half, but one forgets time in the magnificent panorama which opens more and more widely to the vision. Another route is by carriage-road from the Glen House; but of all these different excursions that by the bridle-path from Crawford Notch is the favorite one with lovers of mountain-scenery. Within a few years railway communication with the White Mountains has been much improved, and now the passenger may stop close to the Crawford House and other adjacent hotels, but the genuine admirers of the picturesque still very naturally prefer the old-fashioned method of the stage-coach.

From the White Mountains of New Hampshire the summer tourist finds a total change in the character of scenery and the associations of travel by visiting the picturesque water-falls and lakes of Central and Western New York. Trenton Falls, among such natural attractions, is only less famous than Niagara, to which, while inferior in sublimity, it is superior in picturesqueness and variety. This superb chasm lies about fourteen miles west of Utica, and the country surrounding the falls has a soft pastoral loveliness not to be surpassed for those who love Nature in her quieter moods. The falls are close to the hotel, and the visitor plunges almost at once into the heart of a forest as he leaves the hotel-grounds. The light of the sun streams in golden lances through the dim cathedral gloom as we follow the path, fringed with profuse flowers. Beyond, through the openings of the foliage, we get glimpses of noble hill-forms; but between them and us there is a great gulf. The ground rises higher and higher, and suddenly our progress is arrested by the deep chasm whose presence has hitherto been concealed by the gradual ascent and the great fringe of trees on the border. Down below we catch a glimpse of the Kanata River tumbling over its rocky bed.

Here the first descent is made by a series of wooden ladders, and we are landed safely on the bank of the stream. We look ahead and see the first of the series of falls, six in number, known as Sherman Falls, after the discoverer, a grandson of Roger Sherman, of Revolutionary memory. Here the river has made an immense excavation in the limestone, and falls about forty feet into its bed below, with a most furious roaring.

The next water-fall has also a descent of about forty feet, but the precipice seems to be broken into a series of narrow shelves, and over this inclined ledge the waters roll in a tumultuous mass of foam. But the other side of the fall, for it is duplex, is seventy-five feet; and here the stream falls in a thin, silvery sheet, broken into cascades by projecting shales of limestone. In the very center of the ledge are frown-

ing masses of limestone, rising like a bastion, which separate the fall in two. At this point the walls of the cliff on either side rise for one hundred and thirty feet, and through the strata of dark-gray limestone or of loose, crumbling shale, which make up the face of the huge rock-walls, there grow dwarf-cedars of low height, but of great fullness of branch and foliage. Close to the bank, at whose foot the visitor creeps, is the great glory of the chasm, for here the water pours over in one tremendous, arching flood. The color of the leaping water, which is impelled forward in the air as if shot off some gigantic wheel, is an exquisite topaz in hue, and nothing can surpass the beauty of its changing tints, as it lights up in gleams of sunshine. Great clouds of spray rise up, lifting dancing arches of rainbow, and sail away into the upper air in floating wreaths.

Most visitors, after scrambling up and down the stairways necessary to take, in viewing the different beauties of Trenton Falls, find rest in a little wooden cottage built on a rocky plateau under the shadow of the bank. The lovers of science find wonderful fossil forms in the rocks about this spot, in number and curiosity rarely equaled, which adds fresh attraction for those interested in such things, though the majority of visitors care but little for the dead past, in the glory and beauty which fill their senses with the overwhelming present. Next to the great fall, about two hundred yards away, is another, called the Mill-Dam, from its sober and regular descent over an inclined ledge of twelve feet. Then we come to the Alhambra Fall. The rocks here, on each side, are very bold, and fringed from top to bottom with fine cedars, the branches of which are thrust forward in pyramidal shape, with great fullness of foliage. The rock-ledge over which the water tumbles is fully sixty feet high. The top shelves somewhat, and the flood pours over this in a superb amber stream on the one side, while on the left is a wild cataract, where the stream rushes over the various strata, arrayed like great stairs, in a succession of infinitely varied falls, combining the forms of the gentlest cascade and the most savage torrent. Tall cedars swathe the whole cliff with a mass of impenetrable gloom on either side, far down the edges of the cataract, lending it an aspect of united majesty and beauty.

All about Trenton Falls the rock-forms—both the isolated ones and the cliffs—are remarkable for their bold and eccentric shapes, and lend a peculiar accent of wildness to the roar and glitter of the tumbling waters. Among these are the Pinnacle, a cliff-form which shoots up like an obelisk, two hundred feet in height; a huge perpendicular cliff, called the Tarpeian Rock, around which the deep, dark waters glide smoothly; and a great column of limestone, which looks down on the hills around it. The country in the vicinity of the falls is beautifully picturesque, and the woods have a park-like charm, which make them a most attractive promenade. Trenton Falls and their surroundings are quite remarkable for the diversity of their beauties, ranging from the gentle and idyllic to the bold and sublime.

Somewhat southeast from Trenton Falls, and only a few hours' ride by stage and rail, is the charming Otsego Lake, which Fenimore Cooper has made immortal in our fiction, through his novel of "The Pioneers." The shade of Leatherstocking

haunts this classic precinct, and has probably contributed largely to make the region a favorite haunt of summer tourists, who make their headquarters at Cooperstown, which is situated near the foot of the lake. In a northwesterly direction, a few miles away from Cooperstown, is Richfield Springs, a notable watering-place, with communication from the former place by stage. Richfield Springs is a resort principally known

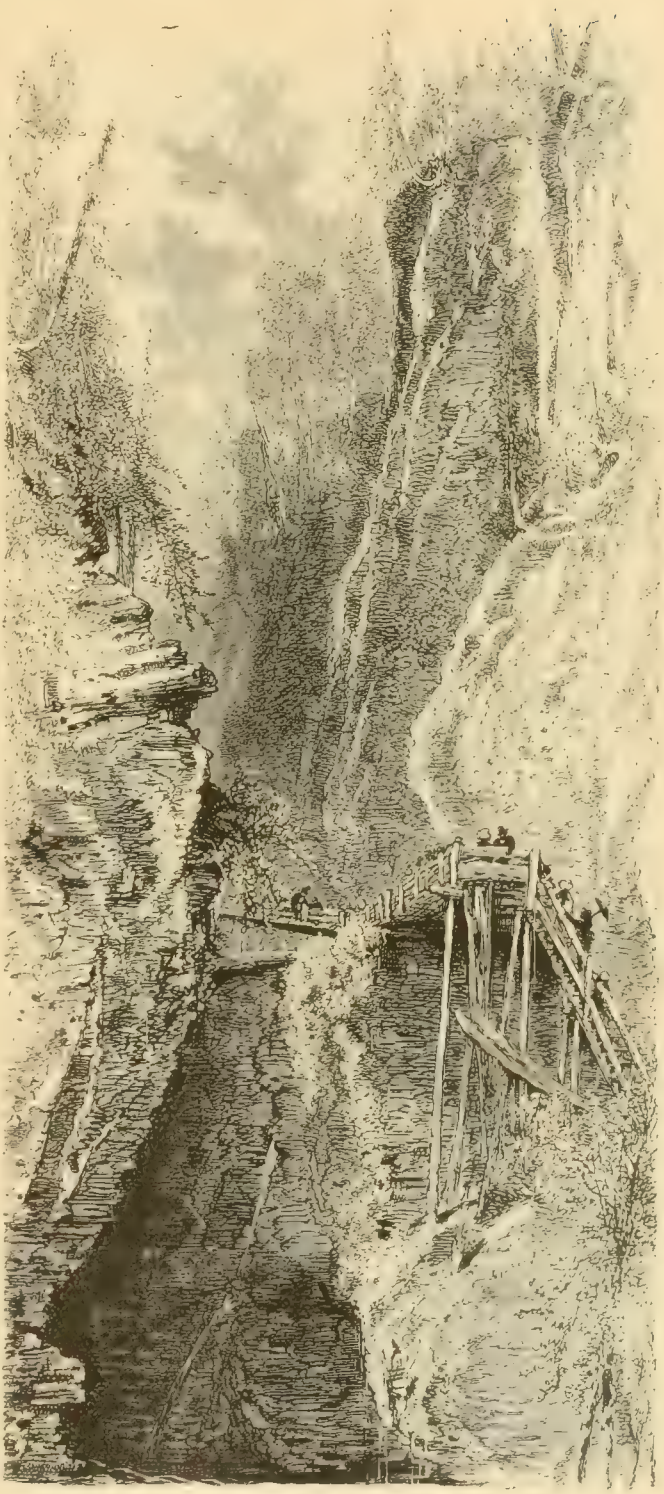


A Nook near the Foot of Lake Canandaigua.

for its sulphur-waters, though the scenery and surroundings are of an attractive character. We must go much farther west to reach the great lake-region of Central New York, which, in its way, is as picturesque as any portion of the United States. The principal of these lakes are Oneida, Cayuga, and Seneca, and among the smaller ones are Canandaigua, Keuka, and Skaneateles. All these lakes have their main charac-

teristics in common. They are long and narrow, more or less studded with little islands, and surrounded by high, bold hills, often densely wooded to the very water's edge.

Let us take a brief glance at the charming Lake Canandaigua, one of the smaller ones of the group, as fairly typical of the whole. The lake lies among six towns, one of which is named from it. They look down on the Sleeping Beauty, as the lake has been sometimes called, from a background of wooded slope, or hill-side, smiling with vineyards, and see their images reflected in its calm bosom. It reaches sixteen miles from north to south, and is nowhere broader than a mile or two. The jutting points and deep coves frequently shut out most of its little length. On it ply two small steamboats and craft innumerable, vehicles of business or pleasure. The mimic capes shoot out in long, sharp tongues, and off the outer edge you may often dive, if you will, into four hundred feet of water. The lake presents almost every variety of scenery in its surroundings of hills and meadows, charming forests, and vineyard-covered slopes. For the sportsman and tour-



Entrance to Watkins Glen.



Glen Cathedral.

ist, Canandaigua, in common with its sister lakes, is a fascinating spot, and its shores are usually well patronized by summer pleasure-seekers.

At the head of Seneca Lake is the town of Watkins, which has become famous to lovers of the picturesque on account of its wonderful glen. The town lies within the shadow of Buck Mountain, and as we pass up the main street, parallel with the mountain-slope, a walk of a quarter of a mile brings us to a bridge which spans a narrow stream. This stream cuts its way through the lower slope of the mountain-range, and has formed for itself a short pass or *cul-de-sac*, which terminates abruptly at a distance of a few hundred yards in a lofty wall that stretches across the path and bars all further progress. Behind this solemn gateway of natural masonry lie the gloomy ravines, the infinite variety of water-falls, foaming rapids, and deep, silent pools, which have become famous under the designation of Watkins Glen. The mode of entrance to the glen is by rude stairways, running diagonally along the face of the wall, strongly propped and braced. Landing-places occur at intervals, from which other stairways spring, and thus the ascent is made till we surmount the entrance to the gorge.

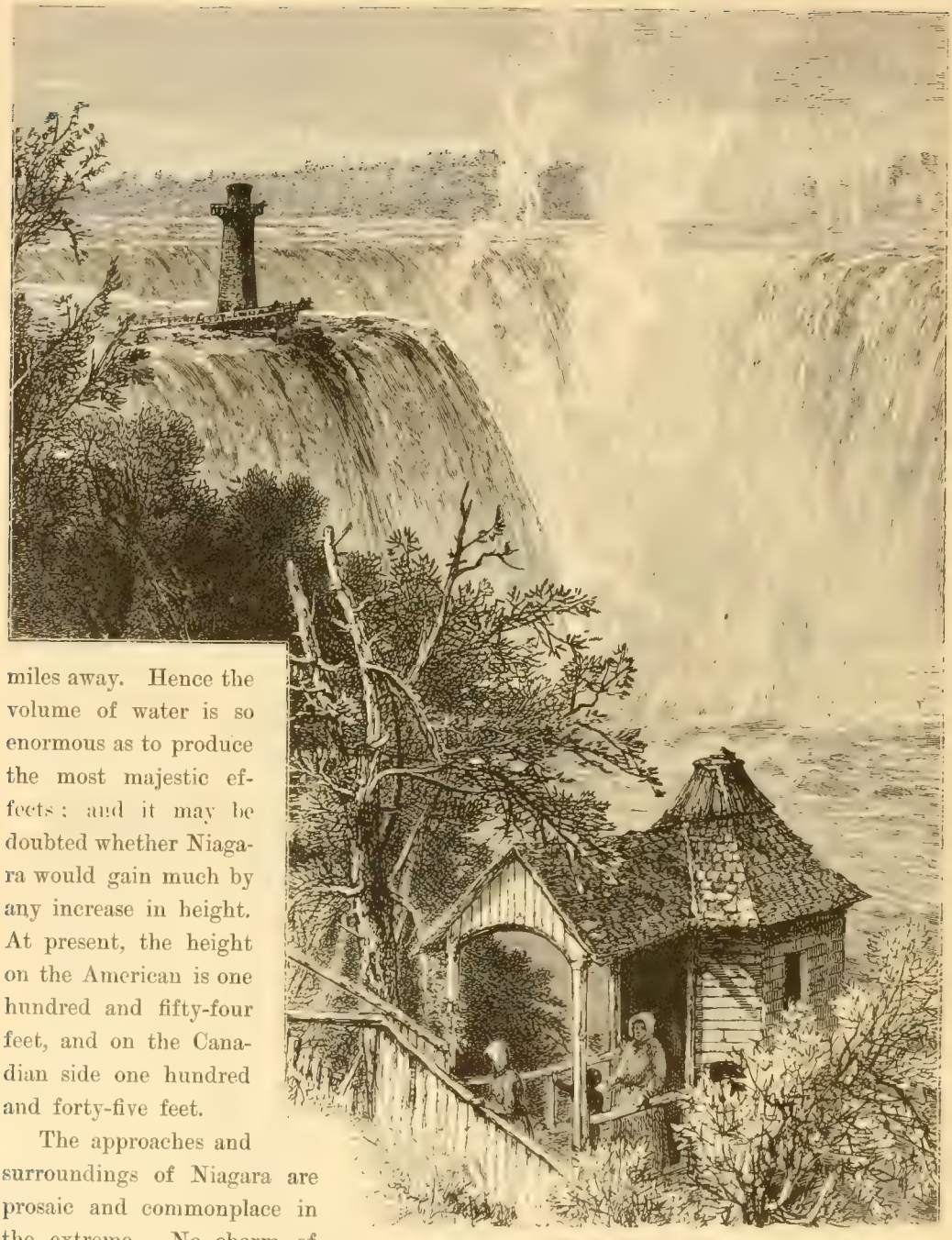
First, we come to Glen Alpha, where the river pours and swirls in cascades through the great chasm, and dashes its spray high up on

the steep walls. The place grows more and more weird, and we seem to be amid the ruins of some wonderful primitive world. The rocks take on the most grotesque forms, and the abyss, along whose sides we clamber on the rude stairways, sends up a cold chill like that from a charnel-house. The walls over our heads rise tier on tier to a height which shuts out all but a narrow strip of the blue sky. When we have climbed out of this gloomy but impressive gorge by the winding and narrow stairways, we find ourselves on a shelf of the mountain, where an excellent hotel invites the weary tourist.

From the Mountain-House a downward path conducts us almost to the bed of the stream, and, after passing another series of cascades and rapids, we cross a bridge to the other side of the gorge, where the cliffs are rent and torn into many strange shapes. They finally expand into a wide amphitheatre, to which has been given the name of Glen Cathedral. The circular walls, rising to a great height, are crowned with dense green hemlocks. The floor of the amphitheatre is as smooth as if laid by human hands, and the stream spreads over the floor with hardly a ripple to break its surface. As we pass on, fresh cascades reveal their beauty to us, and we have the Glen of the Pools before us, so called from the extent and variety of its water-worn basins. Cavern Cascade and Rainbow Falls successively charm the eye and the fancy, as we survey them from the ladders and stairways on which we climb from point to point.

In this deep rift of the mountain the eye shifts from beauty to beauty, from marvel to marvel, with unsatiated sense of delight. The tumbling water-falls; the dark, silent pools; the light above reflecting from cliff to cliff, and glancing with rich beauty on rock and cascade; the fantastic growths of trees at every point of vantage, and the interlacing branches above; the picturesque bridges and stairways; the profound silence, only broken by the sound of the waters—all these conditions make up a fascinating charm, that each succeeding picture varies in detail, but which pertains with equal force to every part of the glen. The extreme length of the glen is about three miles, and the cliffs at the deepest part of the gorge have an altitude of probably three hundred feet. Three miles south of Watkins is Havana Glen, which is very picturesque, but lacking in many of the elements which make Watkins Glen so unique.

From Watkins Glen, which every year attracts tourists more and more, a journey of a little more than six hours over a branch of the New York Central Railway, as far as Rochester, and thence by the main line, brings us to a spot which, take it for all in all, is one of the very greatest natural wonders in the world—Niagara Falls, a cataract so supreme in all the elements which constitute sublimity that no other thus far known to travelers is worthy to be compared with it. Here the accumulated waters of four great inland seas hurl themselves madly over on their way to the ocean through the Niagara River to Lake Ontario, and thence to the St. Lawrence. The territory, whose drainage passes over this great cliff of limestone, is equal to the whole continent of Europe, many of the streams that feed Lake Superior being fully two thousand



Horseshoe Falls, Niagara.

miles away. Hence the volume of water is so enormous as to produce the most majestic effects; and it may be doubted whether Niagara would gain much by any increase in height. At present, the height on the American is one hundred and fifty-four feet, and on the Canadian side one hundred and forty-five feet.

The approaches and surroundings of Niagara are prosaic and commonplace in the extreme. No charm of the picturesque or beautiful diverts the attention from the height of the imposing precipice and the thundering flood of waters which pours over it. No taste in landscape-gardening has been employed to beautify the village of Niagara, and everything has been left to those con-

ditions imposed by the rapacity of the people, who prey on the pockets and patience of wonder-seekers from all parts of the world. Some movement has from time to time been set on foot to transform Niagara into an international park, guarded by the joint authority of Canada and the State of New York, but it has made little progress since Lord Dufferin, the late Governor-General of Canada, who originated the plan, was transferred to another field of duty.

The flow of the great volume of waters from Lake Erie through Niagara River into Lake Ontario has gradually caused the retrogression of the cataract from the mouth of the Niagara River to the present location, the tremendous force of the



Rapids above the American Fall.

waters having cut through the great limestone ledge and worn it back. It is supposed that it has already taken thirty-seven thousand years to accomplish this, and that it will take a much longer period to remove it back to the head of Lake Erie, at which time the falls will be somewhat higher than they are now, as the slope of the river-bed is considerable in its angle of descent.

Niagara Falls are divided into two cataracts—the Horseshoe Fall, which is on the Canada side, and the fall on the American side. Between the two falls are Goat and Luna Islands. The whole width of the river at this point is forty-five hundred feet, of which the American fall occupies eleven hundred feet, Goat and Luna Islands

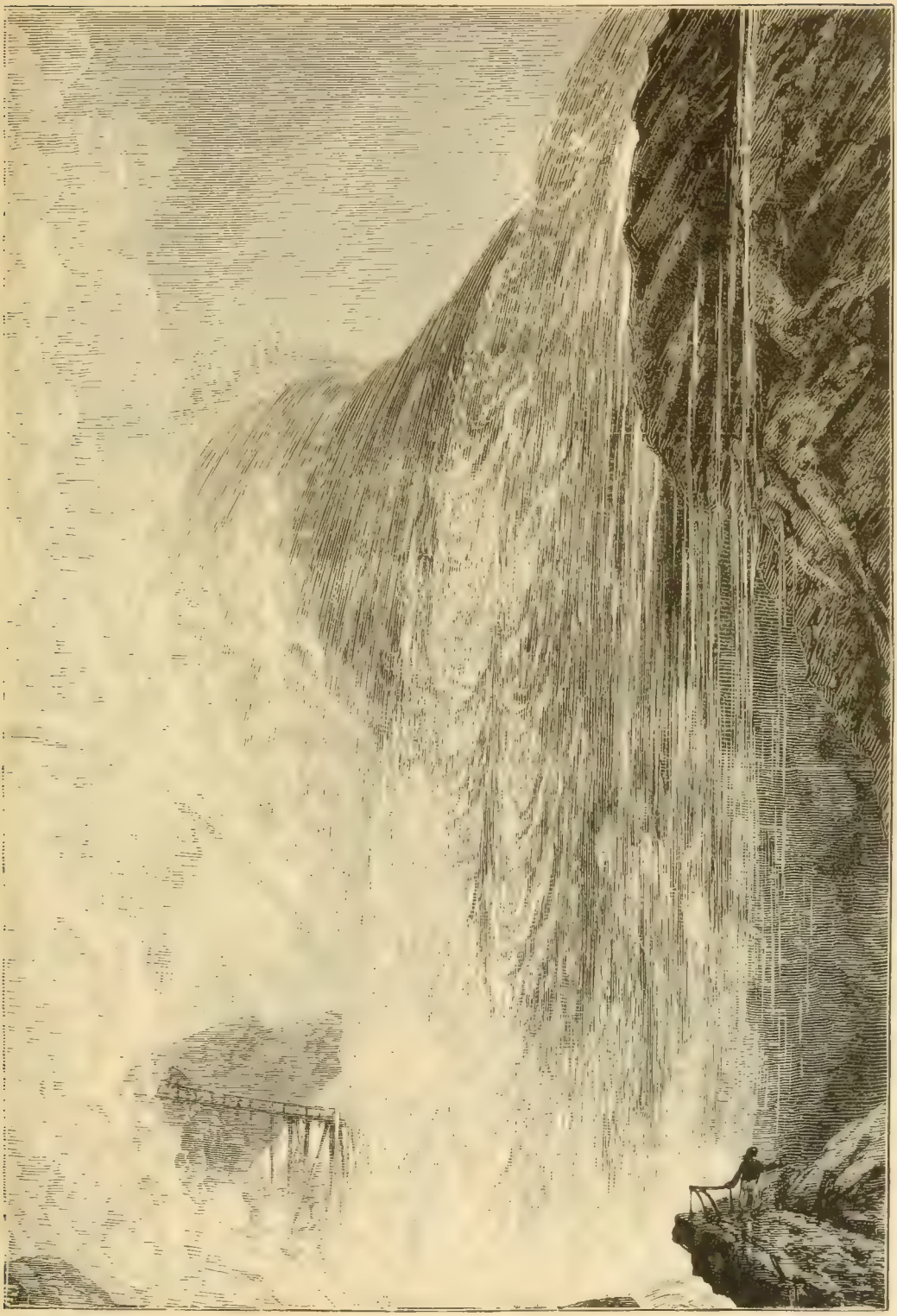
fourteen hundred feet, and the Horseshoe two thousand feet, though from the curvilinear shape of the latter its actual line is probably nearly twice as much. One does not at first observe any detail, for the effect is of a stunning nature which blunts all the faculties of observation, and indeed prevents a full recognition of the peerless grandeur of the scene. We see the extraordinary volume of the flood and its deep, rich color; we see the vast clouds of smoke-like spray rising from the base of the cataract; we hear the booming thunder of the waters—that is all. It is only when the eye and imagination have become a litttle familiarized with the scene that we estimate the sight at its true value.

The rapids above the Horseshoe Falls are best viewed from the top of Prince of Wales's Tower, situated on an island in the rapids above the fall. The scene is one which gives the mind a vivid notion of irrepressible power, almost as much as the vision of the cataract itself close at hand. The rapids extend from the verge of the falls for half a mile, and so furious is the impetuosity of the current that the center is heaped up in a ridge-like form, and the waves on either side leap into the air like huge fish. Great logs and trees come swooping down, taking leaps like greyhounds, and dart along with the speed of a railway-train to the verge of the cataract. One fancies a human being borne down by this irresistible current with a feeling of creeping horror.

An excellent view of the American rapids is had from the Cataract House, which is near the bridge connecting the American side with Bath Island, and thence again with Goat Island. Here we see the rushing waters contrasted with innumerable small wooded islets, giving an immense relief to the current, and exhibiting its rapidity in the most vivid way. By moonlight this view is magnificent beyond description. The white light shines over the very verge of the cataract, casting its beams over the fierce rapids, turning the dark waves into ebony and the leaping foam into molten silver.

Crossing the bridge to Goat Island we find ourselves amid the fragrant delights of a garden, for roses and heliotropes grow on every side, while the long, lush grass makes a soft mat for the feet, and groves of fine trees offer agreeable shade. Sooner or later this spot, smiling and fair amid the war of waters, will be carried away, for year by year the torrent is gnawing into it. On the left side there is a bridge connecting the island with a firm rock on the very verge of the cataract. On this rock formerly stood Terrapin Tower, which was removed in 1873 on account of its unsafety. We venture to cross the short bridge, and from the slippery rock catch the sublimest of all views of the falls. We see only the Horseshoe, to be sure; but we see all of that, and get a transcendent vision of the might of the cataract. The clouds of spray mount up to us as if they were exhalations from some magician's den, and had power to drag us down again with their shadowy, spectral forms.

We have seen the falls from above; let us now dare the drenching spray and see them from behind the vast flood of descending waters. Having donned oil-skin suits, we descend the stairway from Termination Point, which abuts on the American fall, and make our way carefully to the bottom of the rocks. Here we come to the famous



Cave of the Winds.

Cave of the Winds, the great lion of the American Fall. We find bridges built from rock to rock, under the very cataract, amid all its vapory spray and thundering turmoil. We stagger blindly on, preceded by the guide, our eyes blinded by the torrents of spray incessantly dashed against us. The concussion of the waters produces a violent rush of air, against which it is difficult to stand. The slanting beams of sunlight are broken by the mist into innumerable globes and bubbles of color, and the cavern seems a palace of broken rainbows. But it is difficult to admire under the beating of the madly-drifting columns and whirls of spray. So violent is the storm that it almost knocks the breath out of the body, while the ears are deafened by the noise as if by a cannonade. The cataract shrieks and groans and bellows in fifty different voices at once, while over all is heard the deep-booming roar of the distant Horseshoe Fall. Amid all this hideous turmoil of sound, too, may be heard faint, inarticulate voices, which seem to the imagination full of import—voices that invite, murmur, and threaten with mysterious eloquence—such voices as the superstitious German peasant hears in the depth of the midnight woods, when he believes the Erl-king and his demon-train are sweeping through the forests.

The Whirlpool is three miles below, and it can be best observed from the American side at the base of the cliff, to which we descend by an elevator. The width of the chasm at the rapids immediately above the Whirlpool is narrowed to eight hundred feet, and the depth of the river and the swiftness of the current heap up the water in the center, from which foaming waves continually shoot into the air. The Whirlpool is a vast semicircular eddy, which, meeting with some resistance at that point from the bank, swirls around in a furious, boiling curve. Descending the rugged cliff, we find ourselves at the head of the whirling waters. They fairly hiss as they seethe past us, seeming to have an independent life of their own, and to be animated with human passions. Into this whirlpool, and into the smaller eddies which are made by its reaction, great trees are sucked down head-foremost in a second, and vomited out again with every vestige of branches and bark stripped off, and even great splinters riven out of the hard wood. It is a veritable battle of the waters, current fighting current, wave fighting wave, with a great uproar.

The longer one lingers at Niagara Falls the deeper the impression made on the mind. Their might and majesty grow on the fancy with continued watching, and weeks may be spent in studying the different glories of the cataract with ever-growing interest. This is the surest test of the highest degree of beauty or sublimity, and nobly does Niagara meet it. Each fresh point of observation gives new pleasure to the mind, and summer and winter have their corresponding effects of splendor. Niagara will always remain one of the wonders of the world, a Mecca to which lovers of the sublime will turn their feet for all ages to come.

No greater contrast can be presented to the fancy, after the sublimity of Niagara, than the fairy-like beauty of the Thousand Islands, to which we will now journey. At Niagara, we found ourselves awed and dwarfed by the might of Nature; here, we are charmed and soothed by her serene, picturesque loveliness. Just at the point where



Among the Thousand Islands.

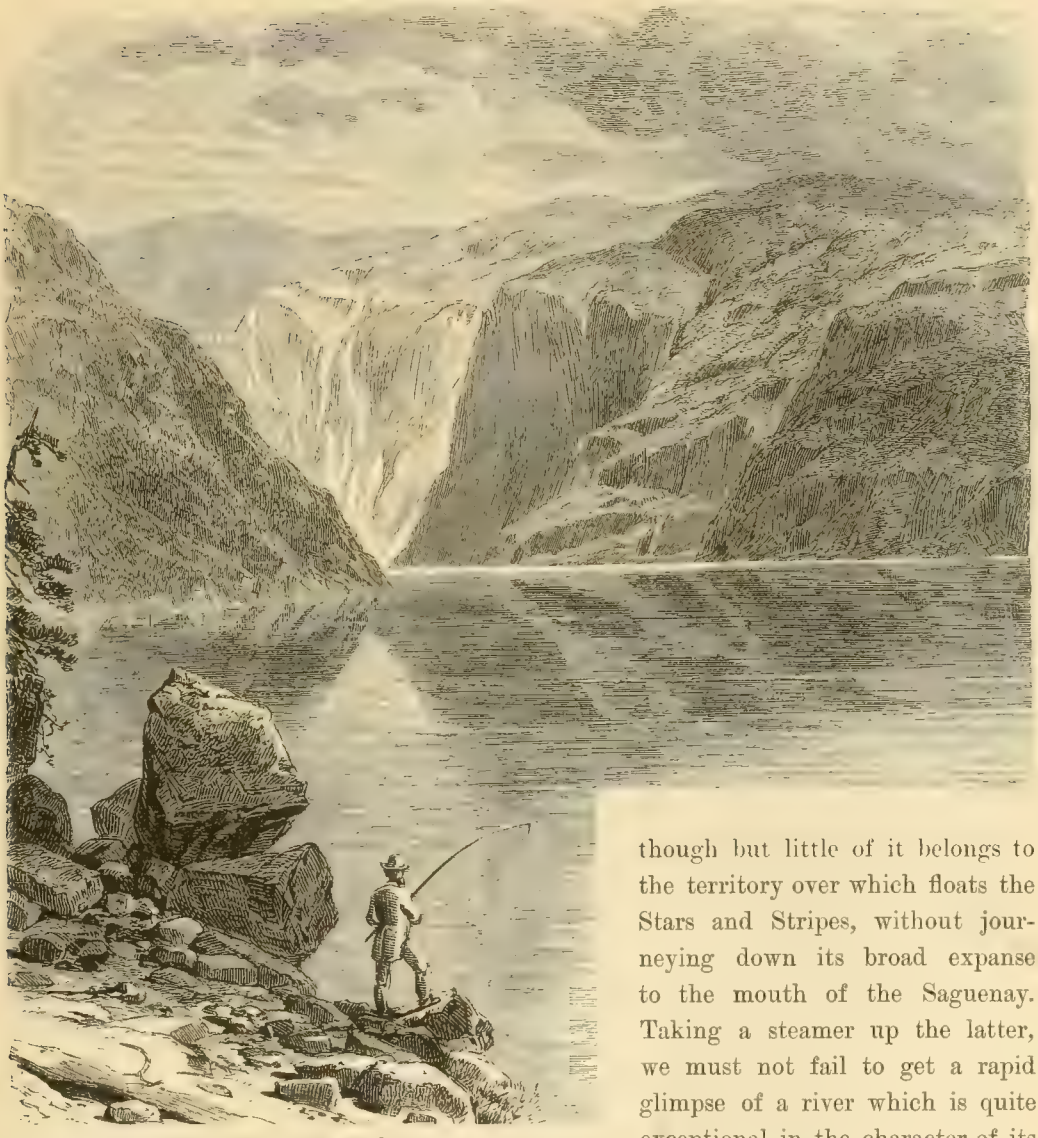
Lake Ontario empties its waters into the great river St. Lawrence, a barrier of granite rock bars its course. Through the grooves and depressions in this rock the river winds its way by a hundred different channels; while all the higher masses rise above the surface of the water as tiny islets, crowned with brush-wood and Canadian pines. Ages ago, during the great glacial period, the ice wore down the summits of these rocky bosses into smooth, rounded domes; and now they appear upon the river's edge like basking whales or huge elephants' backs. You may trace the markings of the glacier on the scratched and worn granite, just as you may trace it on the wall-like rocks of Swiss valleys, or on the grand slopes of our own Western Sierras. Sometimes the water has washed away the side into a mimic cliff; but, more often, the

rounded boss rises in a gentle curve above the blue waves, showing its red seamed structure near the edge, and covered toward its summit by mold, on which grow low bushes or tall and stately trees.

Some of the islands are big enough to afford farms for the industrious squatter, who has made himself a title by the simple act of settling down bodily on his appropriated realm. Others, however, are mere points of granite, on which a single pine maintains a struggling existence against wave in summer and ice-floe in winter; while not a few consist only of a bare, rocky hog's back, just raised an inch or two above the general level of the water. But the most wonderful point of all is their number. Most people imagine that the term "Thousand Islands" is a pardonable poetical exaggeration, covering a prosaic and statistical reality of some fifty or a hundred actual islets. But no, not at all—the popular name really understates the true features of the case. A regular survey reveals the astonishing fact that no fewer than *three thousand* of these lovely little fairy-lands stud the blue expanse to which they give their name—the Lake of the Thousand Islands. All day long you may wander in and out among their intricate mazes, gliding round tiny capes, exploring narrow channels, losing your way hopelessly in watery *culs-de-sac*, and drinking in beauty to your soul's content. Fairy-lands we called them just now, and fairy-lands they veritably seem. Their charm is all their own. One may see wonderful variety of scenery on this planet of ours, north, south, east, and west; but we can never see anything so unique, so individual, so perfectly *sui generis* as these Thousand Islands. Not that they are so surpassingly beautiful; but their beauty is so unlike anything that one may see anywhere else. Tiny little islands, placed in tiny little rivers, crowned with tiny little chalets, and navigated by tiny little yachts; it all reminds one so thoroughly of one's childish dream-lands, that we should hardly be surprised to see Queen Mab or Queen Titania step down, wand in hand, to the water's side, and a group of attendant fairies dance around her in a grassy circle.

Summering at the Thousand Islands would be almost like living in the fabled land of the lotus-eaters, were it not that out-of-door sports invite so persuasively that the blood is kept in a constant state of exhilaration. Boating and fishing alternate with enjoying the "sweet doing nothing" suggested by soft blue skies, gentle breezes, and calm waters. Those who love the gay crowds of fashion may enjoy them at the hotels, but to those of more robust tastes camping-out will be far more agreeable. Many of the uninhabited islands gleam with the snowy canvas of little parties, and the out-door bivouac presents here less hardship than in other regions, as most of the comforts and luxuries of life may be so easily obtained. This charming haunt has so grown in favor during a few years that it is probable, before many seasons have passed, that every island will be utilized for summer homes, where there is enough ground to erect a little cottage, thus transforming it into a sort of American Venice, for the only means of communication between the denizens of this inland archipelago is by boat.

We must not leave the St. Lawrence, one of the noblest of American streams,



Point Crépe, Saguenay River.

though but little of it belongs to the territory over which floats the Stars and Stripes, without journeying down its broad expanse to the mouth of the Saguenay. Taking a steamer up the latter, we must not fail to get a rapid glimpse of a river which is quite exceptional in the character of its scenery, though there is a deep tinge of gloom and solemnity in these strangely majestic cliffs. The early mariners were so terrified by its massive, desolate banks, that they did not dare explore it. To them it was a river of perilous currents, soundless depths, fierce storms, threatening rocks, destructive whirlpools, and around it hung sad Indian legends that only deepened the mystery of its natural surroundings. The whale and the walrus formerly disported in its deep tides, but these have long since disappeared, and now lumber-rafts coming down from the wilderness, or the paddles of excursion-steamboats, alone ruffle its quiet. The river is formed by the junction of two outlets of St. John's Lake, which lies far back in the Canadian wilderness. In its upper part the river passes over cliffs



Put-in-Bay, Lake Erie.

in several magnificent cascades, and rushes between rocky bluffs from two hundred to a thousand feet in height, and for a distance of sixty miles from the mouth the width is not less than a mile. In some places soundings are not found at three hundred and thirty fathoms, and everywhere the water is exceedingly deep and inky-black in color. Fish exist here in great numbers, including salmon, sturgeon, pickerel, and trout. The river has no windings, few projecting bluffs, and no farms or villages on its banks. Nature was in her most stern and uncompromising mood, and lavished no smiling graces on this offspring of earthquake and convulsion, for it must have been in a monstrous outbreak that a mountain-chain was cleft in twain, and the deep bed formed for the passage of the black waters of the Saguenay. All the forms are rude, awkward, and gigantic, with no greenery, no grassy meadows in sight, only a few dwarfed pines standing among the rock-clefts. It is a river of gloom, branded and blighted by primitive desolation. Occasionally a ravine breaks the walls, exposing in its darkening hollow the white foam of a mountain-torrent, where a shabby, unkempt saw-mill gives some human sign. Otherwise all is savage and silent. No birds skim the waters, and there is no suggestion of animal life.

When we pass Trinity Rock and Cape Eternity there is a flutter of pleasure among the passengers, for these are among the most interesting sights of the voyage. These two monstrous capes, eighteen hundred feet in height, flank the entrance to Trinity Bay, one of the estuaries of the river. Trinity, named from the three distinct peaks on its northern summit, presents a face of fractured granite, which appears almost white in contrast with the somber, pine-clad front of Eternity. The boat apparently passes within a few yards; but a pebble hurled by a strong arm falls far short of its mark. So our boat toils all day through a wilderness of bowlders, precipices, and mountains. When we at last return again into the broad and cheerful St. Lawrence, it is like emerging from subterranean gloom and mystery into yellow sunshine; yet there is a fascination about the black river and its giant walls which few minds can resist, though the effect is far from exhilarating. The somberness of the river itself is, however, partly lightened by the picturesque variety of the tourists and travelers on the boat. American tourists, English tourists, Canadian tourists, lumbermen and backwoodsmen in primitive garb, and blanketed Indians, with a sprinkling of gayly dressed ladies, make an amusing collision of individualities, which rarely fails to produce entertaining incidents.

Other charming summer resorts, scattered through the great length and breadth of our land, are almost too numerous to notice with more than a passing glance. The various springs of Virginia are old-established watering-places, delightful in their scenic surroundings, which have for the most part been famous for the last half-century. Pennsylvania, with its beautiful rivers and fine mountains, has many a lovely spot which capital has embellished with good hotels, and where Nature has lavished her picturesque gifts with no sparing hand; and even in the West, where wealth and civilization are more recent, popular and attractive resorts have sprung up of late years, which now divert the interest of many who not long ago regarded the summer trip eastward as an essential part of the year's experience. The romantic lake-region of Wisconsin, where Nature sports in her most idyllic mood, contains many delightful watering-places, where the visitors, if they do not go to the lengths of fashionable dissipation characteristic of many Eastern resorts, find every resource of healthy and rational enjoyment.

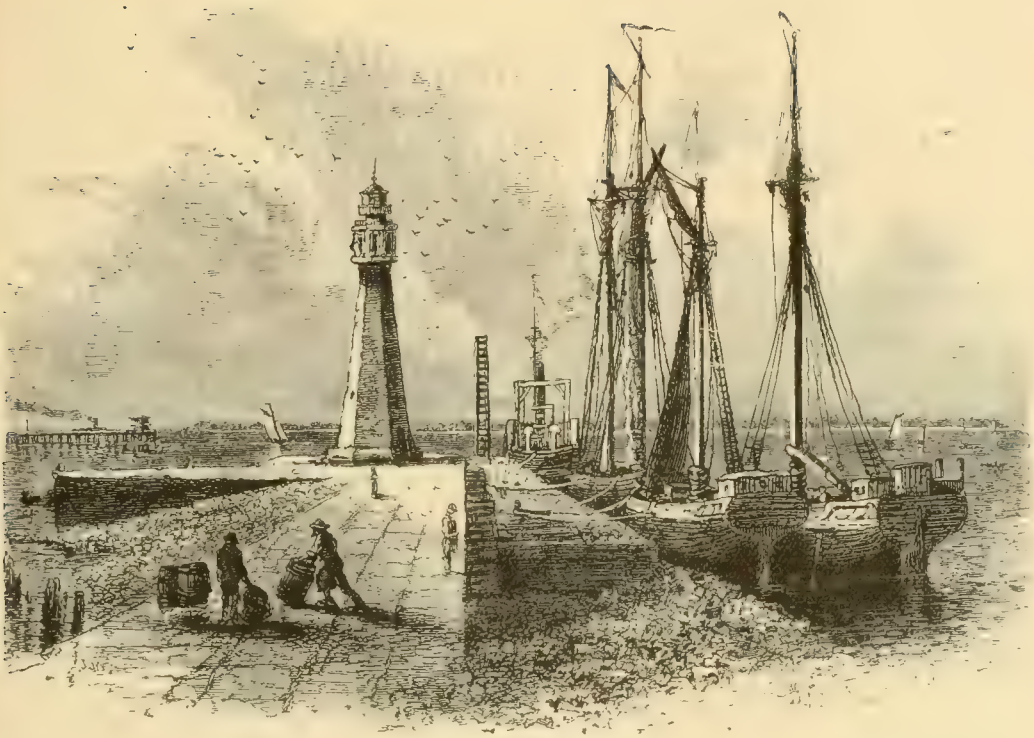
Of all the central summer resorts there is none, perhaps, so well known as Put-in-Bay, Lake Erie, a few miles from Sandusky. This bay received its name from the fact that Commodore Perry *put in* there with his fleet before and after the battle of Lake Erie, during the War of 1812. It is a lovely sheet of water, with little Gibraltar Islet nestled in its crescent, and on Put-in-Bay Island two large, fine hotels stand among the rich vineyards. So mild and equable is the climate at this favored spot, that roses bloom in October. Several of the islands in this bay, among them Kelley's Island, are famous for their wine-culture, and many of the best and most popular American wines emanate from the splendid vineyards whose grapes drink in the golden sunshine of this secluded nook. Here, in the shining autumn, when the long aisles are full of vintage-gatherers, and the trellises are heavy with purple

bunches, when the little steamers go away loaded with grapes, and the presses in the wine-houses crush out their juice by day and by night, the islands are like an enchanted land, watching the autumn out and the winter in with light-hearted joyousness. The water is still and blue, the colored trees are reflected in its mirror, a golden haze shines over the near islands, and a purple shadow reflects on those afar.

Owing to the mildness and salubrity of the climate, the season lasts much longer here than in many other resorts, and many linger toward the very edge of winter, to enjoy the merry vintage-season.



Kelly's Island, Lake Erie.



Light-house, Buffalo.

THE GREAT LAKES.

Buffalo, the head of our inland seas—The historic interest of Lake Erie—Cleveland, Toledo, and Sandusky—Lake Huron—The Straits and Island of Mackinac—The western shore of Lake Michigan—Chicago and Milwaukee—The situation and grandeur of Lake Superior—The Pictured Rocks; the varied wonders of its shores—History and legend—The Hudson Bay Company—Mining on Lake Superior.

THE five great sister lakes of America, the most extensive inland seas in the world, which join hands from Minnesota to the ocean, pouring their waters through St. Lawrence River to the sea, have all distinguishing characteristics of scenery and suggestion. Thus, Lake Superior is the most mysterious of the chain, its northern shores being even now only half explored; and strange tales of gold and silver, rubies and amethysts, copper and tin, are even yet brought down by the fur-traders and hunters from its remote shores. Lake Michigan, with its sea-green waters, its islands, its shifting fogs, and its unsurpassed straits of Mackinac, is the most beautiful. The blue Huron, with its pellucid depths, wild shores, and deep woodland solitudes, is the most romantic. The charm of the placid Ontario is entirely dulled by the sublimi-

ties of Niagara Falls and the picturesque loveliness of the Thousand Islands of the St. Lawrence, with both of which it is in close proximity; but it has the prosaic advantage of being the safest of the lakes, a feature which the mariner duly enjoys. Lake Erie has, aside from any beauty of scenery, the most historic interest. Its relics, antiquities, and battles, fill an important place in the records of both our colonial and national life. The lake has its heroes and sayings famous all over the land. Pontiac's spirit haunts the mouth of the Detroit River; Tecumseh flits through the woods on shore; the name of Perry is associated with the Western Islands; and the memory of Mad Anthony Wayne hangs over Presque Isle, now Erie. It was on the north shore of Lake Erie that Tecumseh, bidding a despairing farewell to his British allies, avowed his resolution to lay his bones on the battle-field without retreating. It was at Put-in-Bay that Commodore Perry wrote his famous dispatch, "We have met the enemy, and they are ours." At Presque Isle Mad Anthony Wayne, before going into the fight, gave his laconic field-order for the day to his aide, "Charge the d—d rascals with the bayonet!"

Lake Erie is two hundred and forty miles long, with a mean width of forty miles, and is two hundred and four feet at its greatest depth. It is shallow compared with the other lakes, and the difference is well expressed in the saying, "The surplus waters poured from the deep *basins* of Superior, Michigan, and Huron, flow across the *plate* of Erie into the deep *bowl* of Ontario." It is the most dangerous of the lakes, from its liability to sudden storms and its short, chopping waves, its insecure harbors, and huge sand-bars off the mouths of its rivers. All the vessels navigating the lake are drawn into port by tugs, and the scene of confusion and turmoil in the lake-ports is as great as in the harbor of New York itself.

The shores of Lake Erie are wooded, rising in many places sixty feet above the water. Through this barrier the brooks and streams pour down in ravines, and the banks are full of springs and quicksands. The water is variable in color, according to the direction of the wind—now green, now blue, now a dull, dirty brown. Mirage is seen on the lake at times, but fog rarely, unless it be that soft haze of twilight through which the vessels steal by, resembling so many phantom-ships. In winter come ice-fields, hummocks, and floes, while above them glitter the spears and banners of the aurora in splendid array. The name of the lake was derived from the Indian people first discovered by the Jesuit missionaries two centuries ago. They were known as the Eries, or tribe of the Cat, and, though they were afterward exterminated by the powerful Iroquois Confederacy, they transmitted their name to after-times. The city of Buffalo takes its title from the American bison, which, as late as 1720, roamed along the shore in great herds. The town was first settled in 1801, though the neighboring post of Niagara was founded by the French under La Salle in 1769, previous to which time there had been a few hunters and fur-traders, who had a little stockade-fort here, and lived a perilous life amid the hostile Indians. Buffalo made considerable progress before 1812; but in the war of that year it was burned to the ground by the British. When peace was declared the village was rebuilt, and in 1832

it took its place, ranking as the third city in the State. The Buffalo of to-day is a large, bright, busy town, with broad streets of well-built residences and business-blocks. It possesses a driving-park, and has annual races; it has its club-houses, its brilliant amateur theatricals, and well-supported theatre. But the most noticeable feature of Buffalo is its method of handling grain in bulk by means of elevators. It is true that Chicago and Milwaukee are no less well supplied with these monster appliances, and that the city of New York necessarily has also an extensive elevator system. But the multiplicity of interests is so great in New York that the traveler rarely notices the grain-elevators, which are situated far away from the general track of observation,



Ship-canal, Buffalo.

and it is at Buffalo that the westward-bound tourist is first led to study this wonderful plan of loading and unloading vessels and cars. The wooden monsters who perform this work stand with long trunks and high heads on the banks of the river, waiting for their prey. When the vessels and propellers laden with the spoil of Western harvest-fields are brought up to the wharves, swiftly out of the long neck comes the trunk of the elephantine monster, and, plunging deep down into the hold of the craft, it sucks out the grain till the last kernel is discharged. Within this trunk are two divisions; in one the troughs full of grain pass upon a pliable band, in the other they pass down empty. In the hold of the vessel or propeller are men who shovel

the grain forward toward these troughs, so that they may always go up full; and in the granary of the elevator above are men who regulate the flow of the grain into the shute, and cause it to measure itself on a self-registering apparatus, the whole being adjusted by the touch of a finger. If the grain is to go eastward by canal, the canal-boat waits on the other side. A man opens another door, and another trunk is run down, through which the grain swiftly passes into its new receptacle. Most Americans pass by these wonderful savers of labor with indifference, for they are accustomed to them; but to foreigners they are objects of the greatest curiosity. Mr. Anthony Trollope, the English novelist, refers to them in the following language:

"An elevator is as ugly a monster as has yet been produced. In uncouthness of form it outdoes those obsolete old brutes who used to roam about the semi-aqueous world and live a most uncomfortable life, with their great hungry stomachs and huge unsatisfied maws. Rivers of corn and wheat pass through these monsters night and day; and all this wheat which passes through Buffalo comes loose in bulk; nothing is known of sacks and bags. To any spectator in Buffalo this becomes a matter of course; but this should be explained, as we in England are not accustomed to see wheat traveling in this open, unguarded, and plebeian manner. Wheat with us is aristocratic, and travels always in its private carriage."

Buffalo stands openly and boldly at the eastern end of Lake Erie, not on a sand-bank, like Cleveland; nor back on a bay, as do Toledo and Sandusky; nor up a river, like Detroit. It catches every gale and breeze from the blue waters of Erie, and glimpses of the sparkling, dancing waves may be had from every broad street. The harbor is one of the largest on the lake, but it is often the last gathering-place for the ice, and the last to yield to the breath of spring. So inland transportation sometimes waits a week or two for the clearing of Buffalo Harbor.

At first, after leaving Buffalo, we find the lake-shore bleak and monotonous, only sand-dunes and unimpressive banks, with here and there a village or growing city, with nothing to mark them but mere prosaic prosperity. When we reach the border line of New York, there is an agreeable change. Here begins what is called the "Triangle," a stout elbow of land which Pennsylvania pushes out to vindicate her right to a lake-port. In this triangle is the harbor of Presque Isle, now Erie, one of the earliest of military posts on the lake. The situation of Erie is picturesque, owing to the beauty of its bay and outlying island. The French erected a fort here as early as 1753, and gave it the name of Presque Isle, making it one of the chain of works designed to connect the St. Lawrence with "La Belle Rivière," as they called the Ohio. In 1760 the fort surrendered to the English, and a few years later it, in common with nearly the whole line of frontier posts, fell in the great Indian outbreak which burst like a thunder-bolt on the extensive lake chain of settlements. The present town was incorporated in 1805. In its bay Commodore Perry built and equipped the fleet with which he fought out the great victory of Lake Erie, having in seventy days from the time the trees were cut and hauled to the water's edge constructed his squadron of ships. The remains of Perry's flag-ship, the St. Lawrence,

now lie in Erie Harbor, and the old embankments of the French fort may still be traced on the bank just outside the town. Erie is a very thriving place, being the outlet of the coal and iron district of Western Pennsylvania.

All along the coast we now observe picturesque light-house towers built on lonely islets and rocky ledges, which stand as pillars of fire by night to warn the lake-mariner of a treacherous coast. Passing the Pennsylvania line we reach the Western Reserve of Ohio, as it is called, where Eastern emigration first began to settle in the Buckeye State. This became the favorite locality for New-Englander settlers, and so great became the mania for emigration that, to cure it, all manner of means were used. Among them was a caricature, referring to the effects of fever and ague.



Mouth of Cuyahoga River, Cleveland.

One represented a plump, smiling man on a sleek horse, with the motto, "I am going to Ohio"; the other showing the same man, cadaverous to the last degree, and leading a lean horse, with the satirical device, "I have been to Ohio!" But the region thrived remarkably, and is now one of the most wealthy and prosperous portions of the country.

Cleveland is generally conceded to be the most beautiful city on the Great Lakes. It lies on both sides of the Cuyahoga River, a narrow, crooked stream, which flows through a deep valley into the lake, leaving on both sides the bluffs whose shaded streets have gained the name of "Forest City." The houses are embowered in foliage, and it almost seems like a city built in a wood. In the valley of the river is situated



Lake Erie, from Bluff, Mouth of Rocky River.

a dense mass of iron-mills, lumber-yards, oil-refineries, and other factories and business-places. From above only the wreaths of smoke and the tips of masts betray what is occurring on the flat. The long avenues on the bluffs stretch away in miles of pleasant residences, gardens, velvet lawns, vines, and flowers. Each house is surrounded with greenery, and many of the mansions seen out of town would be called elegant country-seats. Even in its central square, with its post-office, court-house, business blocks, and horse-cars, there is an air of leisure.

Stepping from the trim and beautiful *rus in urbe* above to the verge of the hill, we look down on Cleveland at work—Cleveland soiled with grime and sweat. Over the oily, crooked river wind heavy-laden vessels, drawn by puffing tugs, and every variety of lake-craft, from the scow to the large side-wheel steamboat. Cleveland is famous for its oil-refineries, which line the river for miles, and the products of which are sent to every portion of the world. While the population is largely made up of New-Englanders, there is also an important German element. One of the early land-holders wrote as follows in 1835: "If I make the contract for thirty thousand acres, I expect to send you with all speed fifteen or twenty families of prancing Dutchmen." This Teutonic emigration must have begun early, for the city has miles of thriving vineyards, flowers, wine, dancing, and music, which never came from Puritan stock. Along the lake-shore are many German gardens, and thither the people resort on summer nights, to sit on the grassy slopes, drink wine and beer, and watch the glory of the lake sunsets.

The shore becomes more and more picturesque as we proceed westward from Cleveland, the banks are high and precipitous, and the streams come rushing down in falls and rapids. Rocky River is about seven miles from the city, flowing through a deep gorge between high cliffs, that jut boldly into the lake, and offer a noble prospect, an extensive unbroken view of the lake. Far away on the green curve of the eastern shore glitter the spires of Cleveland, and far away toward the north stretches the glorious expanse of water, on the horizon-line of which faintly gleam dots of white sails, which are still in the middle of the lake, with miles of blue water beyond. The silent sands of the shore hereabout have been a most important witness of an interesting fragment of history.

When the great Indian hero, Pontiac, made his successful attack on all the lake forts in 1763, the post of Detroit made a most determined resistance, and held out through months of suspense and fighting. In the autumn an expedition under Major Wilkins was fitted out at Albany, to relieve the far-distant garrison. After a most toilsome journey, and constant fighting with hostile Indians along the route, the soldiers reached the present site of Buffalo. The officers knew nothing of the treacherous nature of Erie, and embarked in bateaux, high in spirits, for the brilliant waters and golden haze promised a speedy voyage and a successful result, as each heart burned with the hope of saving the beleaguered garrison from the tender mercies of Pontiac. But suddenly there arose a great storm, in which twenty bateaux, most of the field-pieces, all of the ammunition, seventy men, and many of the officers, including the surgeon of the regiment, were lost. When the disheartened survivors reached the shore they turned back and made their way to Fort Schlosser, on the Niagara River, without attempting in their crippled state to reach the Detroit garrison. The locality of the shipwreck was not known until a few years ago, when there were found at the mouth of Rocky River several bayonets, swords (among which was one most elaborately finished with guard and lion's-head hilt of solid silver), an amputation-knife, and other unmistakable relics of the lost expedition.

A short distance west the lake has another store-house of relics. Here, in 1764, Bradstreet's expedition was also wrecked during an autumn storm. The beach again has spoken, and located an historic event. Portions of the bateaux have been found, cannon-balls, a stack of bayonets, a number of perfect musket-barrels, silver spoons, and not a few antique coins. Every storm brings fresh relics ashore, and they are continually captured in fishermen's nets. After the storm and wreck, the American soldiers, under General Israel Putnam, were left to find their way by land to Niagara, four hundred miles away, through a wilderness crossed by rivers and swamps, and swarming with hostile savages. The soldiers suffered severely, and many of them died before reaching the protection of old Fort Schlosser.

West of Rocky River we find three rivers—the Black, Vermilion, and Huron—flowing into the lake through ravines of great beauty. The first-named river at its mouth falls over a rocky ledge, forty-five feet in height, in two streams, and its whole course is full of picturesque beauties, making it remarkable among the Lake Erie tributaries, which are for the most part quiet and tame, oozing through sand-bars into the lake. Beyond the Black River stretch what are known as the "fire-lands," which were set apart for the aid of sufferers by fire in New London, Norwalk, and Fairfield, Connecticut, that State then owning the Western Reserve. An amusing story is told of the determined efforts of the early settlers at sociability under the conditions of privation which surrounded them. A fresh family having arrived, the *élite* of the "fire-lands" gave them a visit of welcome. The hostess prepared to honor them with a feast, but she only had one fire-proof utensil—an old, broken bake-pan. With this she set to work. First pork was fried in it to get lard; then doughnuts were cooked in the lard; thirdly, short-cakes were made in it; fourthly, it was used as a bucket wherewith to draw water; fifthly, the water was boiled in it; and finally the tea was made in the same useful vessel, and the guests pronounced the repast excellent. This very well illustrates the difficulties under which the infant civilization of the West was nurtured into its present greatness and stature.

Sandusky, the "Bay City," has spread before it a charming view. It is not a busy commercial place like Buffalo, nor has it the concentration of wealth which has made Cleveland a city of splendid residences. But the lovely bay, with its gentle, sloping shores and islands, the river sweeping past the town, the green peninsula smiling with vineyards, and the expanse of the broad lake beyond, dotted with wine-islands, suggest the characteristics of the serene and thriving little lake city. Here one is not called on to calculate the profits on grain, coal, iron, or oil, but the poet or artist might find a home on these blooming shores, and ask no fairer prospect.

The beautiful country around Sandusky was once the resort of a remarkable Indian people, known as the "Neutral Nation," a confederacy whose habits were so peaceful and benign as to stand out in amazing contrast to those of their red brethren. Two "cities of refuge" stood on the Sandusky River, as asylums for all fugitives, and these were guarded by armed bands of the Neutral Nation, who used their prowess not for bloodshed and butchery, but for humanity's sake. All who crossed

their boundaries were safe from pursuit, and no one was denied who came in peace. This sacred soil was never reddened, this pledge never violated, till the whites came, and before their fatal presence the Neutral Nation gradually faded away.

Sailing out from the bay we pass unwieldy lumber-boats coming down from the pine-woods of Huron, and a little fleet of fishing-smacks, and reach a group of islands, fifteen or twenty in number, which have come into notice recently, on account of their wine-production. The first pioneers very naturally preferred the solid mainland, and found enough to do in forcing their forest-fields to give them sustenance without encountering the perils of the stormy lake. The Wine Islands, on which there is now a population of several thousand people, were, not very many years ago, only vaguely known, and their earliest inhabitants were fishermen, attracted by the great number of the bass which have given name to a portion of the group, or by wreckers, who gained a precarious and questionable livelihood by plundering the vessels driven on them or the adjoining shore by the lake-storms. Kelley's Island, of which we give an illustration on page 294, is the largest of the American islands, and contains about twenty-eight hundred acres. There is here an Indian writing on the rock, which is said to be the best sculptured and preserved inscription in the West. The ancient tribe of the Eries had a fortified retreat here, whose remains can still be traced, and, according to the best opinions, the inscription spoken of above refers to them and to their destruction by the Iroquois.

The historic interest attached to Put-in-Bay Island, of which previous mention has been made (page 293), as a pleasant summer resort, suggests a brief recurrence to the events which made the name of Perry prominent among our naval heroes. After having built his war-ships in the harbor of Presque Isle, the young commodore made sail for the head of the lake, and anchored in Put-in-Bay, opposite the British fleet, which lay under the guns of Fort Malden, on the Canadian shore. Here he remained for several days, watching the movements of the enemy. At length, on the 10th of September, about sunrise in the morning, the hostile fleet appeared off Put-in-Bay. Perry made sail, but it was some hours before the combatants came within reach of each other's guns, owing to the lightness of the winds. Slowly they drifted toward that death-lock which was to give such a splendid victory to the Americans. On his flag-ship, the Lawrence, Perry had hoisted a flag inscribed with the dying words of Captain Lawrence, "Don't give up the ship!" Insignificant as this naval contest may be, in view of modern ironclads, torpedoes, and guns with a range of seven miles, it put new courage into a dispirited frontier, and gave the United States a permanent and undisputed sway over Lake Erie.

Owing to the superior range of the English guns, and the impetuosity of Perry, who sailed far in advance of his fleet, the Lawrence was exposed for hours to the whole fire of the British ships, till she was completely disabled, and her decks fairly ran with blood. The men worked their guns with undaunted spirit, till all were killed or wounded, and the guns were dismounted. At length, about two o'clock, a fresh breeze sprang up, and the Niagara came to the assistance of her suffering con-

sort. Perry instantly took his colors under his arm, and crossed in an open boat, amid the fiercest fire of the enemy, to the fresh vessel, which he then made his flag-ship. Reaching the Niagara in safety, he renewed the fight, brought the other vessels up into line, ordered a general engagement, broke the British line, and kept up his fire till all the British vessels struck their colors. Commodore Barclay, the British commander, who had lost an arm at Trafalgar under Nelson, was severely wounded. After the battle the dead were buried, and the officers of both sides were laid in a common grave, near the beach of the island, the mound being marked by an ancient willow-tree. There is a commemorative statue of Perry at Cleveland, and all the islands off Sandusky are associated with this historic tradition. In Ohio, one county, four towns, and twenty-four townships, recall the name of the gallant American commander. On Gibraltar Island, which lies in the hollow of Put-in-Bay, there is a bold headland where it is said Perry used to go for the purpose of sweeping the wide horizon with his glass, in expectation of his coming enemy.



Perry's Lookout, Gibraltar Island.

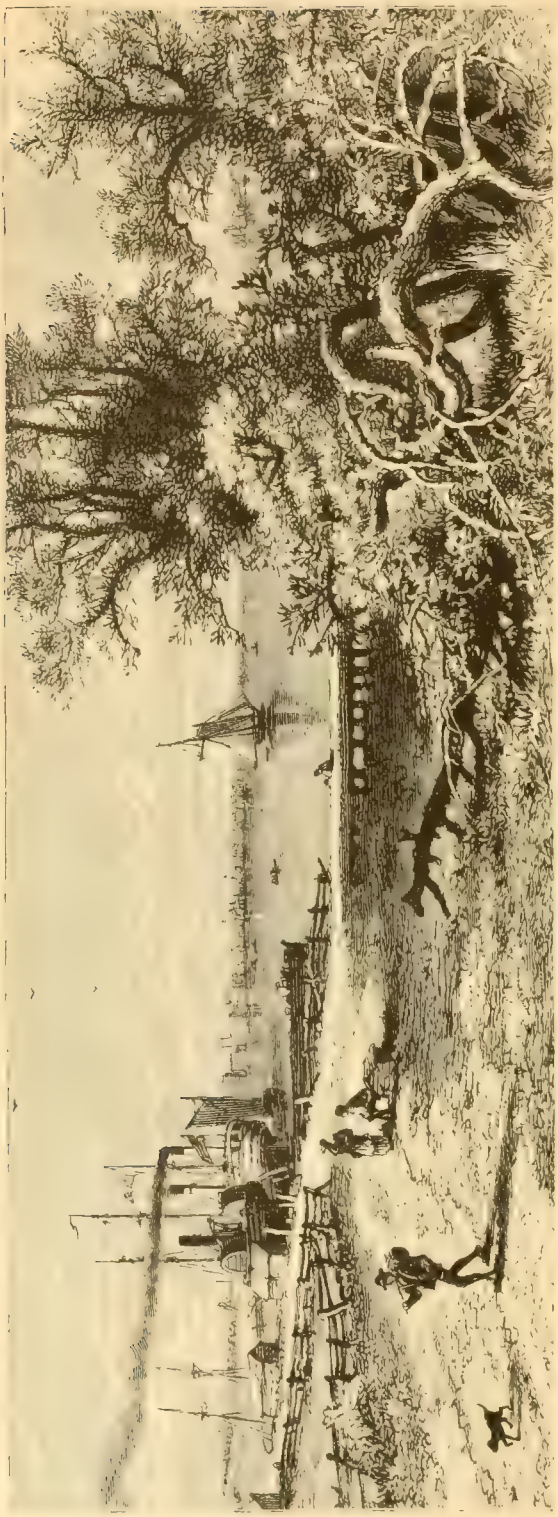
The Wine Islands are now known in a more peaceful connection. Their vineyards have become celebrated, and many of the most excellent and palatable Ameri-

can wines are made here. The inhabitants are mostly Germans from the Rhine region, and the skill which they have brought to bear on their congenial occupation has wrought surprising results, and promises still more important ones in the future.

As we proceed westward from Sandusky, we enter on what is called the Black Swamp, a district one hundred and twenty miles long, by forty in width. Its name still clings to it, from the early pioneer dread of a magnificent stretch of dark forest, and swamp of almost impenetrable wildness and luxuriance. Its gloomy depths were the haunts of wild beasts who carried terror to the early settlers, and even to a comparatively recent time it was not made serviceable to the uses of man. The soil of this region is now the richest garden of a rich State, and fine farms and thriving towns and villages everywhere abound. The principal city of this region is Toledo, which stands on the Maumee River, about four miles from Maumee Bay. The country south of Toledo was during the early days of the nation a fierce battle-ground, where Americans, British, and Indians met in repeated conflict. The name of Mad Anthony Wayne, called by the Indians the "Mad," because he "drives and tears everything before him," is closely associated with the early traditions of this region. General Wayne's decisive battle against the Indians was fought on the Maumee in 1794.

A few miles beyond Maumee Bay the coast turns sharply to the north, and soon the boundary-line of Michigan is passed. The eastern end of Lake Erie comes to a point at the place where Buffalo is, but the western end is blunt and unyielding. The Detroit River has no gate-way, but pours at once into the lake from the broad shore. Though its mouth is clogged with islands, there is nothing to indicate the entrance of a grand strait. The northward sloping shore of Michigan, sixty miles in length, between the Ohio boundary and the city of Detroit, is a green, fertile region, of gentle aspect, with numerous little rivers flowing through it. All this territory had two distinct settlements, the more ancient having been French. It was not till 1830 that the tide of American immigration freely flowed into Michigan Territory; and Ohio had a settled population of colonists from New England, and had sent her pioneers into Illinois and Indiana. The Detroit shore remained wholly French. The unextinguished Indian titles, the foreign habits of the French settlers, and the gloomy barrier of the Black Swamp, kept American settlers out of this beautiful land. The little cabins of the French lined the river-banks, though the forest half a mile back was unbroken and primeval. They were a gay, contented race, who lived on terms of amity with the Indians, and never in their enjoyment of the day thought of the morrow.

There are fifteen islands within the first twelve miles of the Detroit River. Father Hennepin, who passed up the strait in 1679, writes in the following enthusiastic terms: "The islands are the finest in the world; the strait is finer than Niagara; the banks are vast meadows; and the prospect is terminated with some hills crowned with vineyards; trees bearing good fruit, groves and forests so well disposed that one



Detroit River, from Fort Wayne (below the city).

would think Nature alone could not have made, without the aid of art, so charming a prospect." The river has neither foam, rapids, nor mountains; it has not that sweep to the sea, that incoming of the salt tide, that give the ocean-rivers their majesty; yet it is a grand strait, full to the very brim of its green shores, calm, deep, and beautiful.

The city of Detroit, with the exception of Mackinac, the first white settlement in the Northwest, was visited by the French in 1610. Permanent settlement was not made until ninety-one years later, when a fort was built, and named after the French colonial minister, Ponchartrain, whose name is also perpetuated in Louisiana. Some years later a colony of French emigrants came out from France, who, mingling with the Indians, began that race of half-breeds whose history is so interlinked with that of the fur-trade. Thus, originally organized as a French military and trading post, it has always retained some characteristics which to-day set it apart from the other lake cities, in its French customs and names. Down the strait, in the early days, came twice a year the canoes and bateaux, laden with furs from the far West and the Red River of the North. Then came a period of jollity and revel, music, dancing, and drinking, ending with vows and prayers in the little church. Then Detroit was quiet again for

another six months. In 1805 the old town was destroyed, and the new town which arose on the site was laid out with more regularity, but in a way which utterly destroyed the picturesqueness and quaintness that marked the old French settlement of the early fur-trading *régime*. The flag flying over Detroit has been changed five times, in the following order: French, British, American, British, American. It has been the scene of one surrender, twelve massacres, and fifty battles—a grim record of historic tragedies which few, if any, other American places can show. Detroit was already a century old when Cleveland and Buffalo were born.

The most striking figure in the history of Detroit is that of Pontiac, the great Ottawa chieftain, and probably the most gifted and daring of all the Indian leaders who have taken part in our history, with the possible exception of King Philip, in early colonial times. This warrior and statesman of the red race possessed an astuteness and sagacity which would have been most noticeable in a white man. He succeeded in forming a powerful alliance between tribes which had been life-long foes, and hurling this consolidated force against the English. His grand scheme was to capture by a simultaneous attack all the British posts in the West, twelve garrisoned forts, extending from Niagara to Pittsburg, along the lake-shore, and thence to the Mississippi. Such was the personal influence of Pontiac that he succeeded in uniting the most discordant tribes, and carrying out his plan. Nine posts were taken on the same day (May, 1763), and their garrisons massacred to a man. Detroit made a successful resistance, owing to the warning given by an Indian damsel, but it would ultimately have fallen into the hands of Pontiac, had not a letter arrived from the French commander-in-chief, announcing that peace had been declared between Great Britain and France, and ordering him to suspend hostilities.

Above the city the Detroit River curves to the eastward, and enters Lake St. Clair. Here we see long lines of lumber-barges with their tugs, schooners with their raking masts leaning far over under a cloud of canvas, square-sail brigs, scows with patched yellow canvas, and steamers—all striving with their best heels to reach the flats through whose tortuous channels they must all pass, or else lie at anchor till the morning. So they sail on till they reach the clear waters of Lake Huron, in whose pellucid depths fish may be seen swimming hundreds of feet below the surface.

Lake Huron, including Georgian Bay, the latter lying wholly within Canadian territory, is about one hundred and ninety miles wide, by two hundred and eighty miles in length, having on one side of it the southern peninsula of Michigan, on the other Canada. It is the deepest of the lakes, the average depth being about twelve hundred feet, while in some parts of the lake soundings have not been reached at eighteen hundred feet. It has several large harbors and bays, such as Saginaw and Thunder Bay, but for the most part the whole line of the American shore is singularly unprotected and exposed to the severest storms at certain seasons of the year. The upper or northwestern arm of Huron is connected with the waters of Lake Michigan by the Straits of Mackinac, and here it is that the pleasure-seeker or traveler finds one of the most interesting and lovely parts of the United States. In traveling along

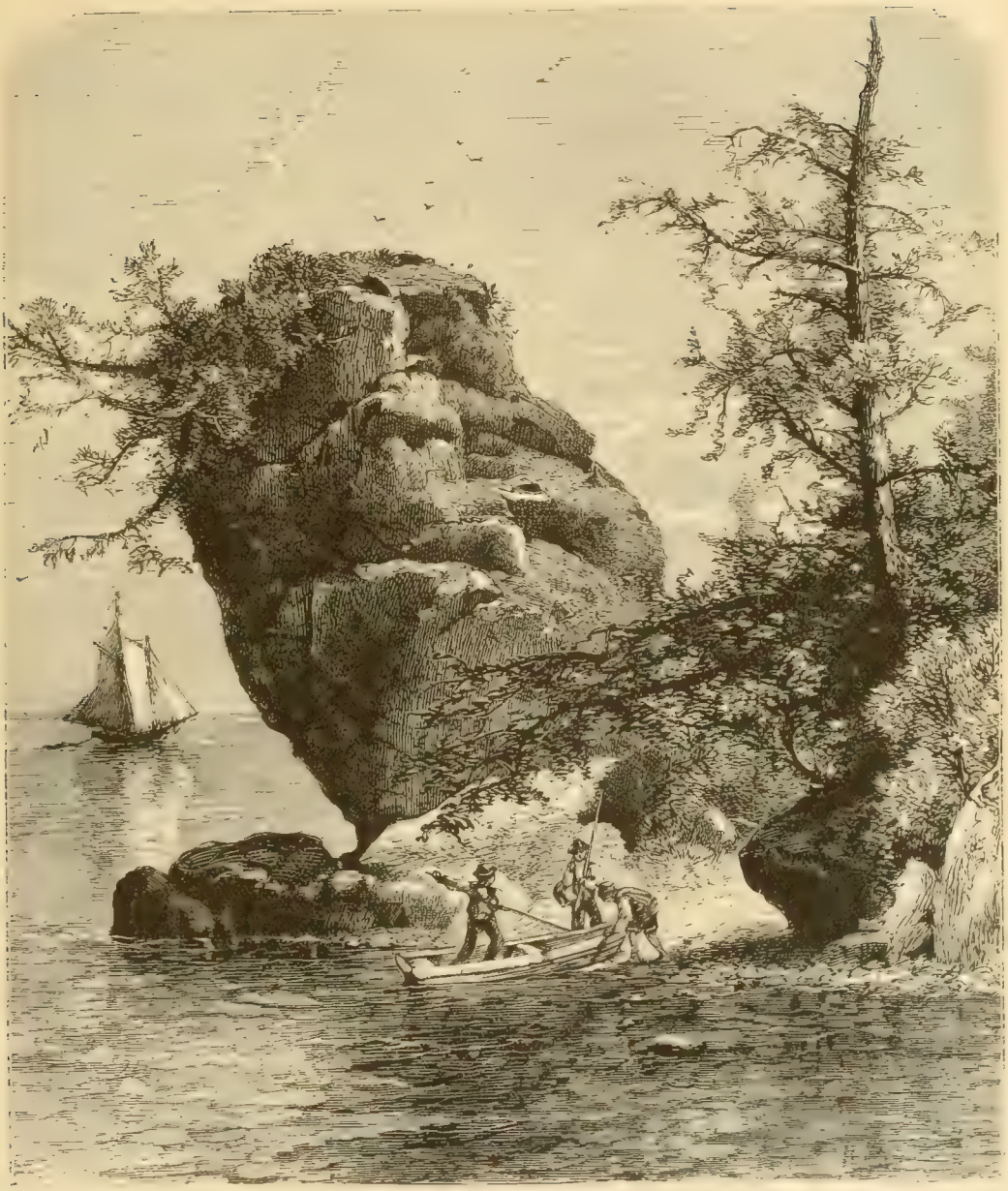
the borders of the Great Lakes we find that the cities and towns which thickly stud the shores are among the most notable examples of growth and progress in the whole country. The universal boast on the great fresh-water seas is, "See how young we are, and how big we are for our age!" You enter a city of one hundred thousand inhabitants. "Twenty years ago, sir, this was an unbroken wilderness," observes the citizen, as he takes you through the busy streets in his luxurious carriage. The steamer stops at a thriving town of ten thousand people. "Five years ago there wasn't so much as a shanty here," says the hotel-keeper, with a flourishing wave of his hand toward the clustering houses and his four-story frame caravansary, decked out in shining green and white. Early, some bright morning, a landing is made at a wood-station; a long wharf, a group of unpainted houses, a store, and several saw-mills, compose a promising settlement. "Six months ago, mister, there warn't even a chip on this yer spot," says a bearded giant, sitting on a wood-pile, watching the passengers as they come ashore.

There is nothing young, however, about Mackinac, nothing new. The village, at the foot of the cliff, is decayed and antiquated; the fort, on the height above, is white and crumbling with age; the very flag is tattered; and, once beyond this fringe of habitations around the port, there is no trace of the white man on the island save one farm-house of the last century, and a ruin on the western shore. There is no commercial activity at Mackinac; the business life of the village died out with the fur-trade; and so different is its aspect from that of the other lake-towns, no matter how small, that the traveler feels as though he was walking through the streets of a New-World Pompeii.

The history of Mackinac begins with the early voyages of Marquette, who established a school for the education of Indian youths in 1671. Eight years later, the daring explorer, Robert Cavalier de la Salle, sailed through the straits on his way to the Mississippi, in a vessel of sixty tons, called the Griffin, built by himself, on Lake Erie, during the previous spring. He stopped at old Mackinac, on the mainland; and Hennepin, the historian of the expedition, describes the astonishment of the Indians on seeing the Griffin, the first vessel that passed through the beautiful straits. In 1688 a French officer, Baron la Houtan, visited the straits, and in his journal makes the first mention of the fur-trade: "The *courriers des bois* have a settlement here, this being a depot for the goods obtained from the south and west savages, for they can not avoid passing this way when they go to the seats of the Illinese and Oumamis, and to the river of Mississippi."

In 1695 the military period begins. At that date M. de la Motte Cadillac, who afterward founded the present city of Detroit, established a small fort on the straits. Then came contests and skirmishes, not unmingled with massacres (for the Indians were enlisted on both sides), and finally the post of Mackinac, together with all the French strongholds on the lakes, was surrendered to the English, in September, 1761.

During the War for Independence the fort was established in its present site on Mackinac Island; and the stars and stripes, superseding the cross of St. George and



Scene on the Shore of Mackinac.

the lilies of the Bourbons, waved for a time peacefully over the heights; but the War of 1812 began, and the small American garrison was surprised and captured by the British, under Captain Robarts, who, having landed at the point still known as the "British Landing," marched across the island to the gate of the fort and forced a surrender. After the victory of Commodore Perry, on Lake Erie, in 1813, it was determined to recapture Fort Mackinac from the British, and a little fleet was sent

from Detroit for that purpose. After wandering in the persistent fogs of Lake Huron, the vessels reached the straits, and a brisk engagement began in the channel, between Round Island and Mackinac. At length the American commander decided to try a land attack, and forces were sent on shore, under command of Colonel Croghan and Major Holmes. They disembarked at the "British Landing," and had begun to cross the island when the British and Indians met them, and a desperate battle ensued in the clearing near the Dousman farm-house. The enemy had the advantage of position and numbers, and, aided by their innumerable Indian allies, they succeeded in defeating the gallant little band, who retreated to the "Landing," leaving a number killed on the field, among them Major Holmes. The American fleet cruised around the island for some time, but "the stars in their courses fought against Sisera." The clumsy vessels could do nothing against the winds and waves; and not until the conclusion of peace, in 1814, was the American flag again hoisted over the Gibraltar of the lakes.

Points on the Straits of Mackinac began to be stations for the fur-trade as early as 1688, but the constant warfare of the military period interfered with the business. In 1809 John Jacob Astor bought out the existing associations, and organized the American Fur Company, with a capital of two millions. For forty years this company monopolized the fur-trade, and Mackinac was the gayest and busiest post in the chain—the great central mart. Here were the supply-stores for the outgoing and incoming *voyageurs*, and the warehouses for the goods brought from New York, as well as for the furs from the interior. From here started the bateaux on their long journey to the Northwest, and here, once or twice a year, came the returned *voyageurs*, spending their gains in a day, with the gay prodigality of their race, laughing, singing, and dancing with the pretty half-breed girls, and then away into the wilderness again. The old buildings of the Fur Company form a large portion of the present village of Mackinac. The warehouses are, for the most part, unused, although portions of some of them are occupied as stores. The present McLeod House, an hotel on the north street, was originally erected as a boarding-house for the company's clerks, in 1809. These were Mackinac's palmy days; her two little streets were crowded with people, and her warehouses filled with merchandise. All the traffic of the company centered here, and its demands necessitated the presence of men of energy and enterprise, some of the oldest and best business-men of the Eastern cities having served an apprenticeship in the little French village under the cliff. Here, also, were made the annual Indian payments, when the neighboring tribes assembled by thousands on the island to receive their stipend.

The natural scenery of Mackinac is charming. The geologist finds mysteries in the masses of calcareous rock dipping at unexpected angles; the antiquarian feasts his eyes on the Druidical circles of ancient stones; the invalid sits on the cliff's edge, in the vivid sunshine, and breathes in the buoyant air with delight, or rides slowly over the old military roads, with the spicery of cedars and juniper alternating with the fresh forest odors of young maples and beeches. The haunted birches abound, and

on the crags grow the weird larches, beckoning with their long fingers—the most human tree of all. Bluebells, on their hair-like stems, swing from the rocks, fading at a touch, and in the deep woods are the Indian pipes, but the ordinary wild-flowers are not to be found. Over toward the British Landing stand the Gothic spires of the blue-green spruces, and now and then an Indian trail crosses the road, worn deep by the feet of the red-men, when the Fairy Island was their favorite and sacred resort.

The Arch Rock, one of the curiosities of Mackinac, is a natural bridge, one hundred and forty-five feet high, by less than three feet wide, spanning the chasm with airy grace. This arch has been excavated by the action of the weather on a projecting angle of the limestone cliff. The beds forming the summit of the arch are cut off from direct connection with the main rock by a narrow gorge of no great depth. The portion supporting the arch on the north side and the curve of the arch itself are comparatively fragile, and can not long resist the action of rains and frosts, which in this latitude, and on a rock thus constituted, produce great ravages every season. The arch is peculiarly beautiful when silvered with the light of the moon, and hence on moonlight nights strangers on the island always visit it. Fairy Arch is of similar formation to Arch Rock, and lifts from the sands with a grace and beauty that justify the name bestowed upon it. The Sugar-Loaf is a conical rock, one hundred and thirty-four feet high, standing alone in hoary majesty in the midst of a grassy plain.

The Lover's Leap, on the western shore, is two hundred feet high, rising from the lake like a rocky column, and separated from the adjoining bank by a deep chasm. The legend, as usual, is of an Indian squaw, who, standing on the rock, waiting and watching for the return of her lover from battle, saw the warriors bringing his dead body to the island, and in her grief threw herself into the lake. But, as a bright spirit once observed, "One gets tired of thinking of all the girls who have leaped!" and enthusiasm flags over a heroine whose name is Me-che-ne-mock-e-nung-o-ne-qua!

The cliff called "Robinson's Folly" has its legend also. This time it was a young officer who went over; indeed, there may have been half a dozen of them, for the Folly was a summer-house where cigars and wine helped to pass away the long summer days, and, when at last the rock crumbled and carried them over, Robinson's Folly was complete, and is still remembered, although it was finished more than a hundred years ago.

Old Fort Holmes, on the highest point of the island, was built by the British in 1812. It was then named Fort George, but, after the Americans took possession of Mackinac, it was renamed after the gallant Major Holmes, who was killed in the battle on Dousman's farm the preceding year. The ruins are still to be seen, and the surveyor's station on the summit is a favorite resort for summer visitors, as the view of the straits is superb.

The present Fort Mackinac was built by the British about a century ago. It stands on the cliff overlooking the village, and its stone-walls and block-houses present

a bold front to the traveler wearied with the peaceful, level shores of the fresh-water seas. This ancient little fort has a long list of honored names among its records—veteran names of the War of 1812, well-known names of the Mexican contest, and



Lover's Leap.

loved, lamented names of the War for the Union. It has always been a favorite station among the Western posts, and many soldiers have looked back with loving regret as the boat carried them away from the beautiful island.

The Island of Mackinac was a sacred spot to the Indians of the lakes. They believed it to be the home of the giant fairies, and never passed its shores without

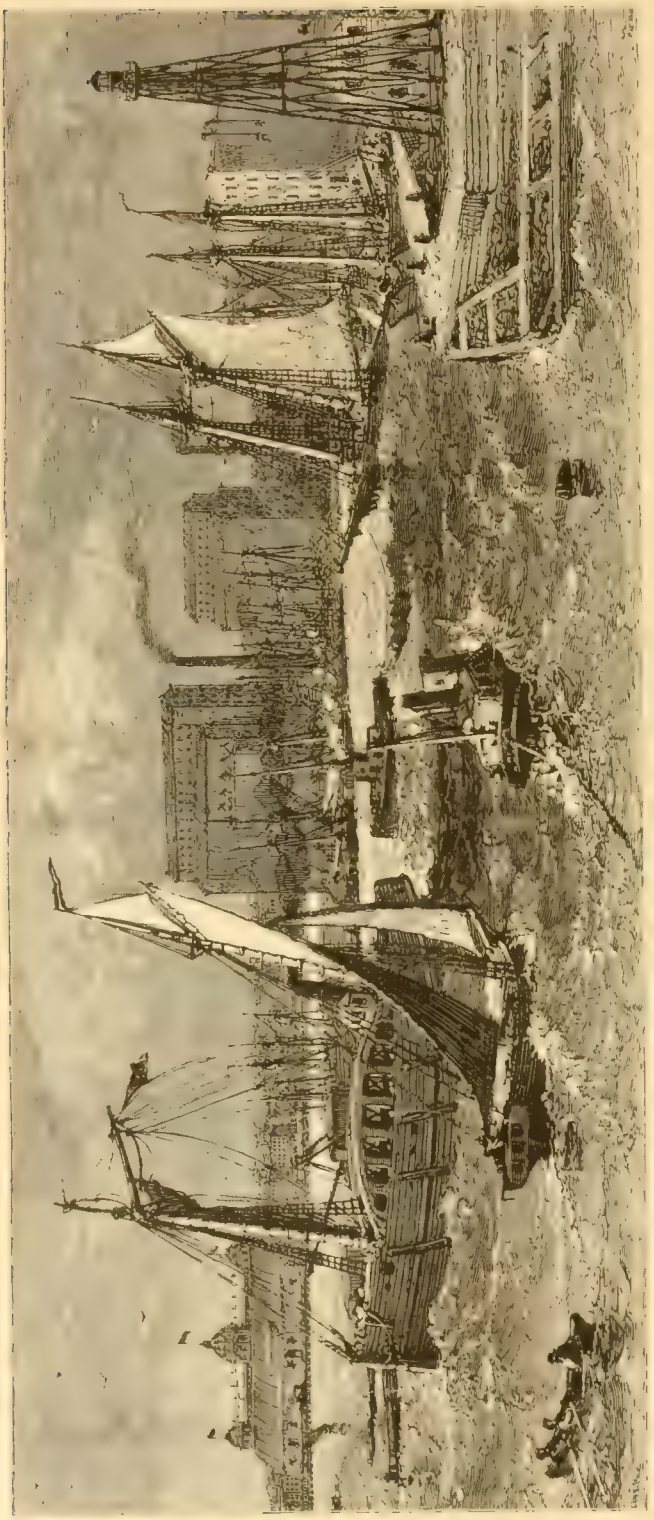
stopping to offer tribute to the powerful genii who guarded the straits. Even now there is a vague belief among the remnants of the tribes that these mystic beings still reside under the island, and sometimes sally forth by night from the hill below the fort.

It is not often that we can obtain a specimen of the original poetry of the Indian race before intercourse with the white man had corrupted its simplicity. Occasionally we find a fragment. Some years ago an aged Indian chieftain left his Mackinac home to visit some of his tribe in the Lake Superior country, and, as he sat upon the deck of the steamer in the clear twilight and watched the outlines of the Fairy Island growing faint in the distance, the old man's heart broke forth in the following apostrophe, which a listener, struck by its beauty, translated and transcribed on the spot :

"Michilimackinac, isle of the clear, deep-water lake! how soothing it is, from amid the smoke of my *opawgun*, to trace thy blue outlines in the distance, and to call from memory the traditions and legends of thy sacred character! How holy wast thou in the eyes of our Indian seers! How pleasant to think of the time when our fathers could see the stillness which the great Manitou shed on thy waters, and hear at evening the sound of the giant fairies, as with rapid step and giddy whirl they danced upon thy limestone battlements! Nothing then disturbed them save the chippering of birds and the rustling of the silver-barked birch. Michilimackinac, isle of the deep lake, farewell!"

There have been projects before Congress to convert this beautiful island into a national park, whereby its forests may escape the woodman's axe, and its shores and rocks remain in their native picturesque beauty, unmarred by the hand of man. We have the Yellowstone and the Yosemite as national pleasure-grounds in the far West —it is only just that government should make a similar reservation east of the Mississippi. Mackinac is already a government station ; the cost of adding the few acres of the island to the national grounds and maintaining supervision over them would be slight, while the public advantages would be considerable. Already its beauties, its health-giving airs, and its facilities for boating and fishing, are making the island a place of summer resort ; convert it into a park, and great numbers of our people will make it their annual Mecca.

Lake Michigan yields to none of the Great Lakes in commercial importance, and certainly presents to the lover of the picturesque, particularly on the western shore, features of scenery which he would scarcely like to miss. Its great port, Chicago, is at the western end of lake navigation, and is the most important railway center as well as the largest grain-depot in the United States. The lake itself is the only one entirely included in our own country. It lies in a north and south direction, extending from the northwestern corner of Indiana and the northern part of Illinois to Mackinac, whence its waters flow into Lake Huron. Its length following the curve is three hundred and fifty miles, its greatest breadth about ninety miles, its mean depth about nine hundred feet.



Mouth of the Chicago River.

The city of Chicago, which lies on the south-western shore of Lake Michigan, is in its way incomparable. Its name stands as a type for all that is solid, swift, and daring in enterprise, and its brilliant history has given it a world-wide renown. The site of the city was first visited by Marquette in 1673, and a fort was built there by the French and named *Checogou,* from an Indian word which means "strong." Fort Dearborn was erected by the United States Government in 1804, and in 1812 the garrison was attacked and destroyed by the Pottawattomie Indians, who belonged to the great confederacy formed by Pontiac. The fort was soon after rebuilt, and remained in existence till 1856, when it was demolished, and the reservation sold to the city of Chicago. The place made but little progress for a long time, and in 1833 it only contained five hundred and fifty inhabitants; in 1850 the population numbered 28,296 inhabitants; and the last census report shows a total of 503,305, a gain of more than two hundred thousand, or of about six-

ty-five per cent, in the last ten years. Such a growth as this is unparalleled, especially when it is remembered that in the early part of the decade a large portion of the city was laid in ashes by the most tremendous conflagration of modern times. The city is divided into three parts by a bayou called the Chicago River, which extends from the lake-shore about five eighths of a mile, then divides into two branches running north and south nearly parallel with the lake, about two miles in each direction. The river and its branches give a water frontage of forty-one miles, while the lake frontage of the city is about eight miles.

The great fire of 1871 burned over an area of three and a half square miles, destroying the most important business and residence portions of the city, and involving a loss of one hundred and ninety million dollars. Since then this area has been wholly rebuilt in a style greatly surpassing the original. The river winding through the heart of the city, lined with warehouses and wharves, filled with vessels, and crossed by bridges, of which there are thirty-three in number, is a strikingly picturesque feature. Here are animation, rich contrasts of color and form, and variety —all that sort of stir and movement that the artist delights in, and one may be fascinated for hours in watching the ever-changing picture of intense, bustling life. In addition to the bridges there are two tunnels, passing under the river, to facilitate communication. The fashionable residence-streets of Chicago are semi-suburban in character, and their tree-embowered mansions alternate with structures of brick and marble. Here may be seen gay throngs of carriages, equestrians, and pedestrians, which give the fashionable promenades as animated an appearance as can be seen anywhere in the United States.

Chicago has a noble system of public parks, which do great credit to the enterprise and taste of the people. These cover an area of nineteen hundred acres, and include six inclosures. One of them, Lincoln Park, is very beautiful, and affords a charming drive by the green-tinted, foam-capped lake. When the park system of Chicago is fully completed, it is not exaggeration to say that it will not be surpassed by that of any city in the United States, if indeed it be equaled. Among objects in the city of special interest to the stranger may be mentioned the huge tunnel under the lake, for the purpose of supplying the city with water, and the great hoisting-works and reservoirs connected with it ; the towering grain-elevators, from the top of which may be had extensive prospects ; the immense stock-yards, the largest in the world ; and the usual educational, literary, and art institutions, which grow up side by side with material interests in our American cities.

Ninety miles north of Chicago lies Milwaukee, and you may go thither by rail or by steamer in the course of a few hours. The sail is particularly delightful, and gives a capital idea of the characteristics of the lake-shore. The bank is thrown up in quite strange forms, as the current, which is very swift, and is gradually wearing away the western shore, is continually remodeling its sandy barrier. At Lake Forest, about twenty-eight miles from Chicago, the fierce surf has worn the soft bank into curious columns and peaks, some of them twisted and seamed in a most grotesque way. After

a gale, when the surf has been very high, the shore is often utterly transformed. Almost every mile of the western beach has, at different times, been strewed with wrecks, and the rotting ribs of many a noble vessel may be seen half buried in the sand, telling a ghastly tale of shipwreck and death. The ocean-shores of Long Island and New Jersey have not been more prolific of destruction to the mariner than the west coast of Lake Michigan. Occasionally we see the bank reaching the water's edge in sharply serrated ridges, like a miniature mountain-chain. The narrow line of sandy beach is everywhere strewed with wrecked trees that have been torn from their beds and still hold their leaves, a sad picture of Nature's wanton ravages. A short distance back from the line of beach the country is very picturesque, and dotted with pleasant summer villas, belonging to Chicago merchants.

Often the shore rises into a noble bluff, half sinking again into a beach, with a dense wood in the rear. All along the route we see rude fishing-villages, and here and there cities and towns of considerable importance. Kenosha and Racine are the most important of these places. The former city is on a high bluff, about fifty miles north of Chicago, and is surrounded by a beautiful prairie country. Racine, a little farther north, is the second city in size in the State of Wisconsin, and is a very thriving, active place, as well as the seat of one of the best endowed and administered of Western colleges. Both cities have excellent harbors. Immense piers, stretching far out into the lake, are characteristic features of Racine.

The city of Milwaukee is one of the prettiest of Western places, and has marked commercial importance as the leading port of Wisconsin, the population reaching more than ninety thousand. The city covers seventeen square miles, and many of the houses are built in semi-rustic fashion, with pleasant grounds about them. As Milwaukee is somewhat hilly, it gives ample chance for the cultivation of the picturesque in the appearance of its more costly residences, and this resource has been utilized with great good taste. The German element, which is very large, gives the city a distinctive character and aspect, though it possesses notwithstanding that air of briskness which is peculiar to the Northwest.

As one looks at Milwaukee in the distance, it presents so many domes, turrets, cupolas, spires, and towers, that he might fancy himself in some Mediterranean port. The architecture is of the most diversified form, and to an Eastern eye seems odd on account of the general use of the cream-colored brick. The Milwaukee River, which passes through the city, is navigable for the largest size of vessels for two miles from the lake, and is spanned by many bridges. The well-built wharves are lined with massive and imposing warehouses and other business structures. Propellers of a thousand tons burden land their freights at the very doors of warehouses, and their gangways lead continuously into the best markets.

The most important industries of Milwaukee are the grain-traffic—in which it is only inferior to Chicago—the brewing of lager-beer, and the manufacture of flour. Among the elevators in the city is one which has a storage capacity of a million and a half bushels, and there is a flouring-mill which can turn out one thousand barrels

of flour daily. These are only slight indices of a prosperity which ranks Milwaukee among the most thriving of Western cities, as it certainly is one of the most charming.

The original Indian name was *Milwacky*, meaning rich or beautiful land, and was applied to a little village on the site of the present city. Milwaukee has monuments reaching far behind written records. Not only are there very ancient Indian relics, but mounds discovered near the town show unmistakable proofs of the residence of



Shore of Lake Michigan.

an earlier race, whose very traditions are now extinct. We know nothing of the visit of any European earlier than Father Marquette, who was such an indefatigable explorer and missionary in far-back colonial times, only fifty-four years after the landing of the Pilgrims in New England. After him very few, except French traders and priests, visited the spot till 1818, when a Frenchman, Solomon Juneau, settled in the Indian village of Milwacky with his family. After the Black-Hawk war in 1835, when the Indians were driven farther back into the West, a few more white families gathered about Juneau's block-house. From that time to this, less than fifty years has sufficed

to make Milwaukee what it is to-day. But we have so many facts of this kind in our history that they cease to be matters of marvel.

Between Lakes Michigan and Superior intervenes the northern peninsula of the State of Michigan, and to reach Superior, the largest of our inland seas, we must return again to the Straits of Mackinac, and through them to Lake Huron. Thence by a series of broad, open channels, interspersed with charming islands, we pass into the Sault Ste.-Marie, and through this to the ocean-like expanse of Superior. This lake is four hundred and twenty miles long following its curve, and one hundred and sixty miles at its greatest breadth. Its greatest depth is eight hundred feet. Its general shape was best indicated by the French fathers, who first came hither in pursuit of the glory of God and of France more than two centuries ago, as "a bended bow, the northern shore being the arc, the southern shore the cord, and the long point the arrow." This long point is an arm of copper-ore thrust out seventy miles into the lake from the south side.

Passing Sault Ste.-Marie, the strait which leads into Superior, and is hardly inferior in beauty to Mackinac, we see Point Iroquois on our left, and immediately opposite the Gros Cap of Canada, six hundred feet in height. Stories of Indian warfare belong to these points. Here the all-victorious Iroquois, who had swept all other tribes from their path, met a serious reverse. They met the Chippewas of the north, and in a two days' fight defeated them with considerable loss. The remnant of the beaten tribe paddled away in their canoes, and the triumphant Iroquois devoted the night to dancing and revel, sinking into a heavy sleep toward morning. The Chippewas had watched their fires from afar, and toward dawn they silently returned and slew their sleeping foes to a man. For many a long year their bleaching bones lay on the shore, to delight the sight of the Indians of the lake-country.

To explore the wild beauties of Superior it is best to leave the steamboat at Munesing Harbor and betake ourselves to a sail-boat or an Indian canoe. It was expected that a large city would be built at Munesing, but the iron interests a little farther westward carried the day, and so Marquette, named after the great Jesuit explorer, attracted population and capital instead.

The celebrated Pictured Rocks stretch from Munesing Harbor eastward along the coast, rising in some places to the height of two hundred feet from the water in sheer precipices without beach at the bases. They show a countless succession of rock-sculptures, glowing with brilliant color, yellow, blue, green, and gray, in all shades of dark and light. Here the dull pages of geology blossom like the rose in forms and tints of indescribable beauty. The rock-pictures succeed each other in such swift succession that they can hardly be enumerated, sweeping from curve to curve for mile after mile. In them the imagination can easily see the likeness of castles, towers, cathedrals, processions, the tracery of tropical foliage, and what not; oftentimes so vivid is the resemblance, that the most sober observer is forced to admit the reality. Passing the Chimneys and the Miner's Castle, we see a wonderful detached mass called Sail-Rock. This so closely resembles a sloop with the jib and

mainsail spread, that at a short distance away one would fancy it a real boat at anchor near the beach.

One of the most striking of the rock-formations past which we sail in wondering admiration is the Grand Portal, so named by the early *voyageurs*, who, it may be said, christened many of the most interesting sights on the shore of Superior, for



Sail-Rock, Lake Superior.

these hardy adventurers never failed to show a keen eye for the wonderful and beautiful. This rock is one hundred feet high by one hundred and sixty-eight feet broad at the water-level; and the cliff above the arch lifts eighty-five feet higher. The Portal opens into a grand vaulted cave arched with yellow sandstone, whose sides have been fretted into a thousand fantastic shapes by huge storm-waves. On a still



Grand Portal, Lake Superior.

day there is a wonderful echo in the cave, the voice reverberating till it dies away into a mysterious whisper. Naturally did the superstitious red-men fancy that this cave was haunted by imps and elves, who played their pranks on rash intruders.

Farther toward the east is Chapel Rock. This natural church, hewed by the hands of the elements, is forty feet above the lake, a temple with an arched roof resting partly on massive columns, partly on the cliffs behind, its forms and lines as perfect as the ruins of Karnak or Baalbec. The glowing colors of the rock might be fancied the frescoing, and in the solemn monotone of the waves washing the base we can hear the suggestions of music. According to the Indian tradition, here dwells the great Manitou of the storm, who rules the winds and waves of the lake from the Sault Ste.-Marie to Fond du Lac. Here, on the chapel beach, the Indian worshipers performed rites to appease the offended deity who held the raging winds in the hollow of his hand. Here, too, at a later date the jovial *voyageurs* in pranksome mood initiated the novices in the fur-trade by plunging them under the water-fall that

dashes over the rocks near by. The Silver Cascade falls from an overhanging cliff one hundred and seventy-five feet into the lake below, though it is but a mere ribbon in breadth. In fact, the whole Superior coast is spangled with innumerable cascades, made by the little rivers, which, instead of flowing through ravines and gorges cut out for their channel, dash madly over the brows of lofty cliffs, veritable homes for laughing water-sprites.

Days might be spent in viewing the Coast of Pictures, for their beauties vary in light and shadow, by sunshine and moonshine. Different outlines present themselves at different times—battlements and arches, cities with spires and towers, foliage and vines, processions of men and animals. Even the great sea-serpent, that strange myth of the seas and lakes, offers a presentment of his unknown form in a wide rock-photograph. In one place there stands the profile of a woman, a majestic face gazing toward the north, to which has been given the name of the "Empress of the Lakes." It is the pleasure of this imperial personage, who has all the mystery and modesty of Diana herself, to show herself only by the light of the moon. You may look for her in vain during the day-time. So benign is the aspect, so rounded the womanly curves of this figure, that one might easily fall into the dream of Endymion.

Sailing westward from the Pictured Rocks past the temples of Au-Train and the Laughing Fish Point, Marquette comes into view, a fine picturesque harbor, the outlet for the Iron Mountain, a ridge lying twelve miles back, whose metal bowels send out hundreds of thousands of tons of iron to the mills of the country. A fleet of hundreds of vessels belongs to this traffic; and no sooner does the ice free the lake in the spring, than their white sails may be seen dotting the water as far as the eye can stretch. Perilous voyages are theirs, too, for many of them founder in storms and go down with all on board off the harborless coast of the Pictured Rocks, which, though splendid to the eye and fancy, are grewsome, indeed, for the mariner. Next beyond we skirt the copper arm of Keweenaw, the arrow in the bow. This great promontory of copper has its history, for its hills were mined centuries ago, and the first white explorers found the ancient furnaces and tools, relics of a mysterious industry of which the Indians knew nothing. These old mining works have been ascribed to the extinct mound-builders, but their origin will always remain in doubt.

The Chippewas of Superior regarded the Point of Copper with profound awe, for here dwelt an implacable demon. Rites and gifts were paid by them when timidly they would land for some copper; then, without looking back, they would flee with the utmost speed of arm and paddle. They would not act as guides, though the most tempting bribes were offered them. Probably this is the greatest copper-mining region in the world. Almost pure native ore is found in masses of five hundred tons. To-day it not only supplies the whole country, but is shipped abroad in large quantities. The north shore of this point is bold with picturesque rock-harbors, and beyond Outonagon, the western end of the copper region, rise the Porcupine Mountains. At Montreal River Michigan yields the lake-shore to Wisconsin.

We soon reach the beautiful island group of the Apostles, so named by Father Marquette. It was here that the heroic Jesuit explorer first heard of the Mississippi, or Great Water, from the Illinois tribes, who were attracted by the trinkets distributed by the French. The idea of exploring this wonderful river never left his mind; and when, in 1673, he entered its waters, he characterized his feeling in his journal as "a joy I am not able to express." The islands make a beautiful archipelago, lying close to the shore, where is situated the United States agency for the Chippewa Indians. Not many years ago an interesting romance took place here. A young man of excellent family, education, and refinement, fell in love with a beautiful, dusky maid, the daughter of a Chippewa chief. His father, to cure him of the infatuation, sent him to the East, hoping that the fashionable gayeties of civilization would cure him of his devotion to his forest love. But it was in vain; he returned, and after a short time he was suddenly missed. A fisherman brought word that he had met the youth in a canoe, paddling his Indian mistress decked in all her finery. The father pursued, but it was too late; the couple had been united in holy bonds by a mission priest. Whether or not the young man, who had sacrificed so much for love, returned to civilization, or became an adopted son of the tribe, we are not told. The large half-breed population of the Lake Superior country, many of whom occupy places of responsibility and trust, show that there have been many such unions, especially on the part of the early French residents, in the old fur-trading times.

At the head of Lake Superior is the St. Louis River, which marks the division between Wisconsin and Minnesota, and also introduces us to the north shore of the lake. On St. Louis Bay stands the town of Duluth, which has been named the Chicago of Lake Superior, for in its first three years it obtained a population of four thousand people. This town lies at the extreme western end of the great lake-chain, as Quebec stands at its eastern end, for the St. Lawrence beyond is but an arm of the sea. Between these two points lie seventeen hundred and fifty miles.

The north shore of Superior is still wrapped largely in mystery, for the settlements are only mere dots on the map, of which but little is known. Stories of great wealth in the precious and useful metals have always been rife of this region, and even now exciting rumors of the treasures that lie hidden on this unknown coast are thick in the air. Only a few years ago no one had traversed this great region except the hunters, traders, and *voyageurs* of the Hudson Bay Company, whose forts are scattered throughout, with little villages of motley inhabitants grouped around them. No commercial enterprise has a more romantic history, or is linked to more striking traditions, except the British East India Company.

The Hudson Bay Company was formed in 1669, by Prince Rupert, the nephew of Charles I, and dashing cavalry leader of the Parliamentary wars. The prince obtained a charter from the second Charles, granting the whole right of trading in all the countries watered by rivers flowing into the Hudson Bay. This right was afterward stretched to cover the whole of British America, and as much of the United States as the hunters found of any use. All through the north coasts of Superior roamed

the company's hunters and trappers; along the myriad of little lakes and rivers the *voyageurs* paddled their canoes, trading with the red-men and gathering together their bales of furs, which were to deck the beautiful shoulders of lovely women in every capital of Europe. The head men were generally English or Scotch, but the *voyageurs* were French and French half-breeds. The quick imaginations of these hardy and daring men have given names to most of the bays, points, and cliffs on the lake, while the more stately English titles are all forgotten. They were a merry race, and



Island No. 1, *Lake Superior.*

recollections of their gallantry, good humor, and unflinching courage and endurance are still rife among the old residents of the Superior region. The adventures, exploits, and conflicts, which occurred under the *regime* of the Hudson Bay Company when at its height of power, make most fascinating reading. Washington Irving has embalmed some of these stories in his book "Astoria," wherein he relates the history of the fur company formed by John Jacob Astor, for the purpose of disputing the arrogant sway of the Hudson Bay Company, an enterprise only foiled by the treachery and imbecility of some of Astor's most trusted agents.

The Superior shore, north of Duluth, towers up in grand cliffs of greenstone and porphyry, from eight to twelve hundred feet in height. Among these cliffs may be noticed specially the Great Palisade, whose columns are more symmetrical and lofty than those of the Hudson, and the picturesque walls of Beaver Bay. The quick humor of the old *voyageurs* is perpetuated in some of the names of interesting points on the shore. For example, Baptism River comes dashing down to the lake beyond the Great Palisade in a series of wild water-falls through a wall of rocks, where it has cut its way when the storm has barred its natural entrance into the lake with sand. The name was given because a persistent scoffer fell in accidentally, and a priest instantly baptized him in spite of himself. A harbor not far away was called Temperance, because there was no bar at its mouth.

At Pigeon River we reach the boundary-line between the United States and Canada. Here begins the Grand Portage, where, through a series of lakes and streams, the names of which have a wild sound, suggestive of peril and hardship—Rainy Lake, Lake of the Woods, and Lake Winnipeg—the *voyageurs* made a quick passage to the Saskatchewan and the Red River country.

The whole Canadian shore is grandly beautiful in its promontories, bays, islands, and cliffs, presenting not less to fascinate the eye and imagination than the southern coast of the lake. Near Fort William, a Hudson Bay Company's post, is the magnificent basaltic cliff of Thunder Cape, thirteen hundred and fifty feet high, upon whose summit rest the dark thunder-clouds, supposed by the Indians to be giant birds brooding on their nests. At the foot of it lies Silver Island, whose mines are of almost unequaled richness, the same rich veins being also found on the shore a few hundred feet away.

Beyond Cape Thunder we find the Bay of Clear Waters, with its picturesque islands; Otter Head, a sheer precipice of a thousand feet, on whose summit stands a monument which on one side displays the profile of a man, and on the other the shape of an otter's head; the broad Bay of Michipicoten, or the Bay of the Hills, surprising for its quaint rock-formations; and Island No. 1, which is a bold mass of rock rising up from the water that intervenes between it and a beautifully formed arch cut out of the shore-cliffs. In brief, this part of Lake Superior, like all the others, offers pictures of unwearying interest. The largest islands are Michipicoten, Saint Ignace, the rugged Pic, and St. Royale, the last named leading the others in bigness. This is forty-five miles in length, and by some legislative freak belongs to Houghton County, Michigan. Royale was once the occasion of a great silver-mining excitement, but it is now deserted, and only its natural beauty left to excite interest; for its castellated and columned cliffs of trap-rock rise directly from water so deep that the largest vessels can lie at the foot within touching distance.



White Mountains, from the Conway Meadows.

THE MOUNTAINS OF THE NORTH.

Some characteristic scenes in the White Mountains—Mount Mansfield and the Green Mountains of Vermont—The Adirondack region of New York—Mountain, lake, forest, river, and water-falls, most picturesquely blended—The Catskills and their peculiarities—The Delaware Water-Gap—The Blue Ridge of Pennsylvania—The beauties of the Juniata region—Mauch Chunk, the most picturesque of mountain towns.

THE mountain system of the eastern side of the North American Continent stretches from the banks of the St. Lawrence to the thirty-fourth parallel of latitude, which passes through the northern part of South Carolina, Georgia, and Tennessee.

As far north as the Hudson the direction is pretty nearly southwest and northeast. In its southern parts, in Alabama, it is at its greatest distance from the sea, but continually approaches nearer as it runs north, till it is traversed by the Hudson River, where it is also reached by tide-water. Here it takes a turn more to the north through Vermont and New Hampshire. It is generally known as the Appalachian Chain, and sometimes as the Alleghanies, though in common usage the latter title is specifically applied to the mountains of Pennsylvania and Virginia, while local names are current in the other States through which the great chain extends.

The mountainous part of Maine is a region of virgin wilderness, only traversed by the stealthy footsteps of wild creatures, or the tramp of the logger, the hunter, or fisherman, except here and there where a lonely country tavern offers its shelter to those who would forget the refinements of civilization, and take a plunge into the delights of wild, free life. The mountains of Maine take the form of scattered spurs, being the sentinels and outposts of the White Mountains of New Hampshire. The highest of them is Mount Katahdin, which rises 5,385 feet. At the foot of these mountains the surface falls away into a charming region of forests, lakes, hills, valleys, and undulating plains, through which swift streams pass, picturesque in cascades and rapids. It is not till we reach New Hampshire, however, that we are introduced to mountain-forms on a grand scale.

The White Mountains rise from a plateau forty-five miles in length by thirty in breadth, and sixteen hundred feet above the level of the sea. The peaks cluster in two groups, the western being locally known as the Franconia group, and the eastern as the White Mountains, a table-land of from ten to twenty miles in breadth stretching between them. The principal summits of the eastern group are Mounts Washington (6,226 feet high), Adams (5,759 feet), Jefferson (5,657 feet), Madison (5,415 feet), Monroe (5,349 feet), Franklin (4,850 feet), and Pleasant (4,704 feet), while the principal peaks of the Franconia group are Lafayette (5,259 feet), Liberty, Cherry Mountain, and Moosehillock (4,811 feet). There are four great valleys leading to the White Mountains—those of the Connecticut, Androscoggin, the Saco, and the Pemigewasset—which receive and pour into their rivers a thousand little streams that force their way down steep glens from springs in the mountain-sides, and flow through narrow valleys among the hills. The course of these little rivulets that break in water-falls, or whose amber flood runs over mossy beds among the forests, furnishes rude but sure pathways and roads by which the traveler gains access to these wild retreats. We have already given some description of Mount Washington and the ascent to its summit, in the article, "Our Inland Pleasure-Places," and will therefore pass by this highest of the White Mountain peaks, and dwell on other characteristic features of the mountains.

It is very nearly a day's journey by stage from North Conway to the little hotel at the foot of Willey Mountain, which looks up to the abrupt precipices of Mount Crawford on the other side. A bugle blown at this spot starts the echoes, repeating them back and forth, heavier and louder than the first blast, so that one might

fancy it the music of a band of giants hidden on the wooded mountain-slope. From the Willey House to the gate of Crawford Notch the path becomes narrower and sterner to the Gate of the Notch. The slope of the mountain-sides, here two or three thousand feet high, is very abrupt, and the narrow ravine is nearly unbroken for three or four miles till one has passed the gate. The picturesque and romantic charm of this spot is most impressive. The river boils and plunges over broken rocks, and the narrow passage for the stage twists and winds, crossing the torrent at intervals over slender bridges, till, at the Gate of the Notch, an opening, hardly wide enough to allow the passage of a team of horses and the raging river, is bounded on each side by a sheer wall of rock, on the projections of which harebells and maiden-hair are waving, and down whose steep sides leap the tiny waters of the Silver Cascade, the course of which can be observed several hundred feet up the sides of Mount Webster, sparkling in the sunlight.



Gate of the Crawford Notch.

It is from Crawford Notch that the tourist usually makes the ascent to Mount Washington on horseback. He may descend, if he chooses, by carriage-road, which follows the

course of a little stream called the Ellis, till a plateau is reached, from which rise the whole group of the White Mountains. Here is situated the Glen House. A wonderful view is opened to the vision at this spot. The five highest mountains of New England—Mounts Washington, Clay, Jefferson, Adams, and Madison—lie before him, dense forests clothing their lower flanks, the ravines, land-slides, and windfalls being clearly defined, and above all tower their desolate peaks. The little plateaus scattered here and there, at the Notch House, at Franconia, and at the Glen, seem to be darker than ordinary places, for the sky is cut off many angles above the horizon on every hand, and the sun has a short transit across the open arc of the sky, leaving a longer period of twilight both at morning and evening even during fair weather; but, when the heavy fog-banks collect on these lonely mountains and the storm-clouds muster on every peak, the impression of gloom is most striking.

Following the stage-road to the west from the Glen House, we soon leave the Androscoggin Valley behind, and from the windings and curves of the route we get magnificent prospects looking back. Now the steep side of Mount Madison looms up with a clear sweep from its base, washed by the rocky Moose River, and its lower flanks clothed with huge forest-trees. Now we see one slope of the mountain, now another, as the road twists like the track of a serpent, till the twin peak of Adams peeps over the immense shoulders of Jefferson. So mountain after mountain, with deeply gullied sides and rocky summits, comes in sight. When the afternoon sun purples the mountain-sides, and the huge trees, twisted and bent, stand like sentinels profiled against the soft light of the hills, the view is peculiarly grand. Each new mountain vision shuts off the others, and there is an ever novel surprise at the number and variety of them, always immense in sweep and grand in curve. When at last we reach the Mount Adams House, we look on the whole great chain of the chief peaks, their forests shimmering with light, and so near that one almost feels like laying his hand on their flickering sides.

Following the borders of the Moose River, and striking across the Cherry Mountain to the White Mountain House, we find ourselves, after a stage-ride of about thirty-five miles, beyond the Ammonoosuc Hills, the range of hills that connects the White Mountains proper with the Franconia range. The Ammonoosuc River, along which the route for the most part passes, is one of the most wild and picturesque streams in New Hampshire, the current running very swiftly, and breaking into many a fine water-fall. Along this valley to the eastward, rise the White Mountains; on the south the Franconia range, and Mount Lafeyette towering majestically above the rest, shut in the plain; while to the west appear the Green Mountains of Vermont. At one's feet on every side lie the valleys, and above the plain rise the mountain-peaks. The ascent into Franconia Notch, which is very steep and difficult, properly begins at the little town of Bethlehem.

The Franconia range, though belonging really to the same group of hills as the rest, has a character distinct from the austere forms of the White Mountains, as it has from the soft swells of the Green Mountains, and is eminently charming and picturesque.

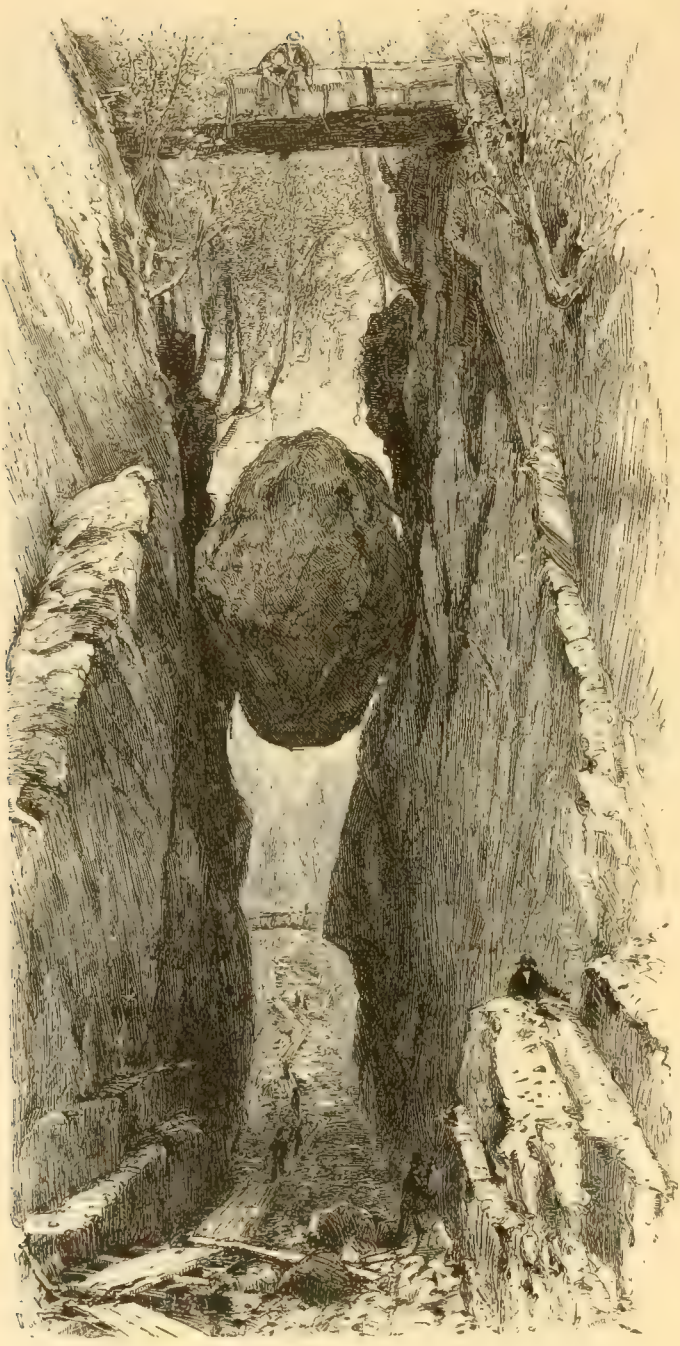
A little way from the Profile House, which commands one of the finest situations in the Franconia Hills, we find ourselves beside the Echo Lake, surrounded by hills, with the high peak of Mount Lafayette overlooking us. As we wander down from the Profile House to the little pebbly beach that borders the lake, green woods, tangled above our heads, protect us from the sun, and in the watery mirror we see reflected all the giant forms around us. While we sit here enjoying its quiet beauty, and watching the flight of the eagles in the air, perhaps we hear the note of a bugle from the little boat that takes passengers to the middle of the lake. The echo bounds from point to point, until the whole forest seems filled with a band of musicians, and the echoes fade away. We instantly think of the lines of the English poet laureate:

"Oh hark! oh hear! How thin and clear,
And thinner, clearer, farther going;
Oh, sweet, and far from cliff and scaur
The horns of elf-land faintly blowing!
Blow, let us hear the purple glens replying,
Blow, bugle; answer, echoes dying, dying, dying."

Following the path back from the lake to the Profile



Profile Mountain.



The Flume.

House, we come to the scarred wall of Eagle Cliff, that rises directly in front of the hotel. Eagles build their nests here, whence the name, and there are various traditions of children and lambs being carried off by these wild pirates of the air. Nearly opposite Eagle Cliff, Profile Mountain rises abruptly from the margin of a little lake, familiarly known as the "Old Man's Wash-Bowl," covered with forest-trees far up its sides, over which, looking down into the valley from its lofty position, two thousand feet up, appears the wonder of the region, the "Old Stone Face," as firmly cut as if chiseled by a sculptor's hand. Hawthorne has thrown over this spot the glamour of his wonderful imagination in one of his short stories. The rocks of which it is formed are three blocks of granite, so set together as to make an overhanging brow, a clearly defined nose, and a sharply modeled chin. Many of the pictures made on rocks by fissures and discolorations require an effort of imagination to make out any likeness from the confused lines, but this view of the old man's profile is startling in its exactness, and needs no fancy to make it real.

Following the course of the Pemigewasset, whose source is in the "Old Man's

Wash-Basin," as the sister stream of the Ammonoosuc is in Echo Lake, with only the rise of a little mound to turn them north or south, one comes on beautiful cascades, where the mountain-stream rushes over its rocky bed. Moving along the rude pathway we soon reach the Flume House, where the narrow gorge of the river widens out to the flowing sweep of the open valley. A rough wagon-path from the hotel attracts us in the direction of falling waters.

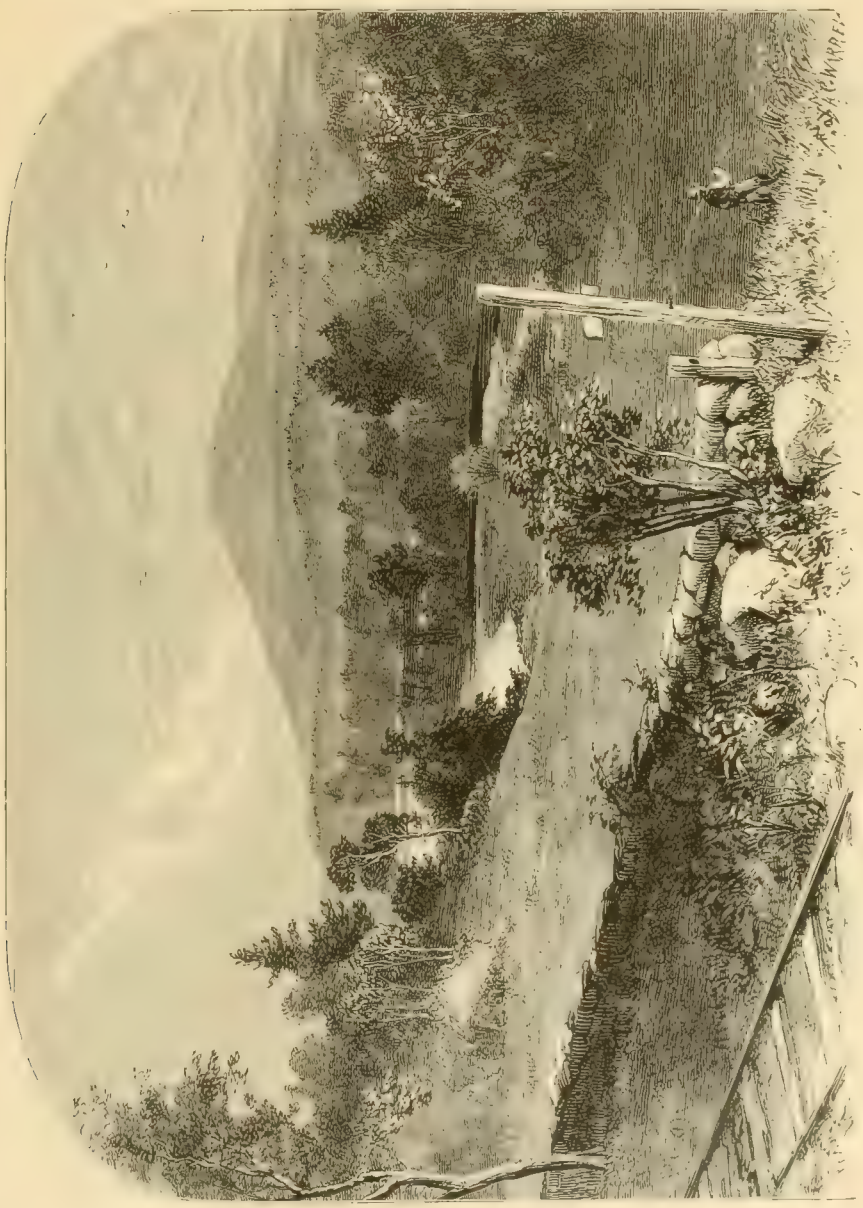
We now come to smooth, flat rocks over which flows the pure, colorless sheet of the mountain-waters. Above, the water dashes over a green, craggy bed, the colors of which are seen in the sparkling sunshine that penetrates the overarching leaves, revealing the gold and amber on sand and pebbly floor. Above this mossy bed we reach a fissure in the hill, with steep sides fifty or more feet high, and hundreds of feet long, narrowing at the upper end till it is only ten or twelve feet. Climbing painfully from one stone to another, crossing and recrossing the ravine, alternately clambering over rocks and rude tree-trunks, we at length reach the narrowest part of the rift. Green mosses cover the rocks and fleck the tree-trunks on the side. Just above the place where we stand a huge bowlder is wedged, seemingly just ready to slip from its place, though it has been there probably thousands of years, and will remain firm for thousands of years more. This ravine is the Flume, one of the celebrated spots of the mountains.

The White Mountains are not yet fully explored. Every year adds some new lake, glen, precipice, cascade, or gorge to the known treasures of the picturesque. The beauties and delights of the wild regions among the mountains of New Hampshire are varied, but we can only glance at them in passing. The parts of the White Mountains which are most frequented do not by any means monopolize the beautiful landscape visions scattered through the State. Mount Washington is not the only peak worth climbing, nor are Conway Meadows the only dream-land. The Saco and the Pemigewasset lapse down from dizzier heights, and wimple through the foreground of grander pictures; but all over the State the coquettish streams run on from beauty to beauty; the broad, green intervals are flecked with the shadows of isolated elms and fringed with the water-side willows, and lonely peaks stand up as landmarks of the Almighty, or look off beyond valley and village, beyond shore and island, far out upon the broad Atlantic. The points of observation, from which the picturesque and the poetical in landscape may be enjoyed, are numerous in almost every township. The mountain-wall, with snowy cope, does not always rise directly before you; but the brook for ever tugs at its bowlder, and the widening water keeps its youthful purity, and the powerful river tumbles and dashes itself for pastime and demands a task, and the roots of the elm and the birch seek out the kindly crevices of the confused granite, and meadow and midland and highland terrace out the landscape, and slope and curve cast themselves into the company with a graceful confidence of being never out of place. The broken and erratic soil, like the typical poet, produces little of sordid value, but much of lasting beauty, and ministers less to man's comfort, but more to his enjoyment.

A native and life-long resident of Concord, who had traveled extensively in Europe, discovered a few years ago, within three miles of his home, a view which he seriously pronounced more pleasing than any he remembered across the ocean. Patriotism may have prompted the emphasis; but the remark was by no means absurd. Turning into an unfrequented road, he beheld a vast landscape before and beneath him, set in a frame of successive, independent mountains, which, though at widely-varying distances, like the stars of heaven, rounded seemingly to a perfect arc. At the extreme left were the symmetrical Uncanoonucs, and then in order came Wachusett, the Francestown group, Monadnock, an unknown mountain, the Mink Hills, Sunapee, Kearsarge, Ragged Mountain, Cardigan, and the Franconia range.

From the summit of Mount Kearsarge, in Merrimac County, one of the finest views in America may be obtained. It stands alone, in the northwest part of the county, and is a sort of French-roofed mountain, forty-five hundred feet high, with a kitchen-part half as high. From the railway-station a ride of four miles, over a road not unpleasantly steep, brings you to a public-house, built in a grove on the crest of the lower mountain, and appropriately named the Winslow House, after the commander of the vessel that sunk the Alabama. This road is skirted all the way with farms, or, at least, rocky fields laid out in squares, and carefully fenced with the too abundant stone that covers their surface. Sheep and goats pick their living among the rocks, with a commendable but pathetic industry; while the bleak farm-houses that are scattered all along to the lower summit present a living conundrum which no man can answer. By the road lie granite bowlders in profusion, of astonishing variety in colors and texture. Some of them, with broken surfaces flashing in the sun, seem like jewels for a giant. Around them grow masses of golden-rod, gentian, and immortelles; and at brief intervals are veteran apple-trees, moss-bound but thrifty, their loaded branches showing that no school-boys pass this way. When you were at the station, the hills around seemed of respectable height and quite interesting; but, as you rise with the road, you see they are only the little fellows on the first form, as over their shoulders begin to peer one row after another of the larger fellows on the forms behind. The road traverses the north, northwest, and west sides of the mountain; and among the first of the pleasant surprises are the little ponds and lakes that gleam out in every direction. The most noticeable, perhaps, is Pleasant Pond, apparently circular, with Scytheville on its hither margin. From the Winslow House we have such a prospect as many tourists are disappointed at not finding among the White Mountains—a view, from a moderate elevation, over slopes and valleys not so far off as to become indistinct or lose their smaller features. From this point, a faint path leads directly up the steep ascent to the summit of the mountain. Sometimes it passes through groves of evergreen, whose roots and boughs make steps and banister; sometimes through the dry bed of the spring-runnel, that has carried off the successive snows of centuries; and sometimes over a smooth, bare ledge of native granite, with precarious footholds at the lines of cleavage. The summit is bald and brown; and the rock, at its more prominent points, is water-worn, like the piers

of an ancient bridge. Here, in a clear day, we may look down upon fully one half of New Hampshire, and a portion of Vermont. The land, with its alternating woods and fields, looks as if the tawny skin of some enormous leopard had been thrown over it in crumpled folds; and two round ponds, gleaming between us and the sun, might



Mount Kearsarge.

be taken for the eyes of the monster, still unclosed. Mountains notch the horizon on every side. To the north, Lafayette, with its scalloped summit, and the sharper peaks of the Franconia range, are distinct and almost neighborly; while to the right of

them, a little more distant and dignified, Mount Washington towers over all. In the south rise Monadnock and Wachusett; and in the west, Ascutney and Mansfield. And all around are uncounted peaks, unnamed, or unknown. To the east, the course of



Monadnock Mountain, from North Peterboro.

the Merrimac may be traced by its broken bluffs of yellow sand; and in its valley are the symmetrical Uncanoonucs, near Manchester. About thirty ponds or lakes, many of them very beautifully nestled among the hills, may be counted. And in every

direction the little villages, resting in the valleys, or clinging to the hill-sides, with their invariable white buildings glimmering in the sunlight, look like quiet cities of the dead amid the expanse of natural beauty and life.

The number of birthplaces of noted men that are in sight from the top of Kearsarge is remarkable. On the eastern side you look almost directly down upon a district ten miles square, in which were born Ezekiel and Daniel Webster, William Pitt Fessenden, John A. Dix, Farmer the electrician, C. C. Coffin, the well-known traveler and correspondent, the Greenes of the "Boston Post," and the Bartlett family (including Ichabod), famous in New Hampshire. United States Senator Wilson was born in Farmington, Lewis Cass in Exeter, United States Senator Grimes in Deering, United States Senator Chandler in Bedford, Levi Woodbury in Portsmouth, Horace Greeley in Amherst, General Butler in Deerfield, Franklin Pierce in Hillsborough, Chief-Justice Chase in Cornish, and Chief-Justice Clifford, of Maine, in Rumney; and all these places may be seen from Kearsarge.

Peterboro, in the western part of Hillsboro County, a dozen miles from the Massachusetts border, has been heretofore entirely out of the lines of travel; but the completion of a railroad from Winchendon to the village of Peterboro a few years since now makes the latter easy of access. It is near the head-waters of the Contoocook, the largest tributary of the Merrimac. One of our engravings represents the view of Monadnock from North Peterboro, with the Contoocook in the foreground. The distance represented in the picture is about ten miles. Monadnock is 3,718 feet high, and, though far inland, can be seen from the ocean. Its base occupies an area measuring about five miles north and south by about three miles east and west. The extreme peak is what is known as Grand Monadnock. It was the inspiration of one of the best of those minor American poems, which were considered good until Lowell and Whittier gave us a higher range of national song. We refer to Mr. Peabody's poem, commencing—

> "Upon the far-off mountain's brow,
> The angry storm had ceased to beat."

Perhaps two of the best and most appropriate stanzas will not be out of place here:

> "I've seen him, when the morning sun
> Burned like a bale-fire on the height;
> I've seen him, when the day was done,
> Bathed in the evening's crimson light.
> I've seen him at the midnight hour,
> When all the world were calmly sleeping,
> Like some stern sentry in his tower,
> His weary watch in silence keeping.
>
> "And there, for ever firm and clear,
> His lofty turret upward springs;

He owns no rival summit near,
No sovereign but the King of kings.
Thousands of nations have passed by,
Thousands of years unknown to story,
And still his aged walls on high
He rears in melancholy glory."

The tourist is generally hurried through Conway to the more famous and alluring North Conway, five miles beyond. But if he stop either in Conway or in West Ossipee, on his way to the heart of the mountains, he will find charming landscapes that will richly reward a short delay in reaching the mountains. One of them specially worth seeing is at the confluence of the Saco and Swift Rivers at Conway. The spectator is looking directly west, with the famous Chocorua and its outlying range at the left of the picture, and Mote Mountain at the right. Chocorua is 3,600 feet high; Mote Mountain, 3,200. The stream spanned by the bridge is Swift River.

East Mountain, in the town of Temple, seen from Peterboro, presents also a very striking view. The foreground and middle distance may be taken as a fair specimen of what may be seen from thousands of ordinary door-yards in New Hampshire. A spot two miles west of the capital, commanding very much such a view, was chosen by the late ex-President Pierce as the site of his permanent home. But the loss of his wife caused him to relinquish the design of building on it; and to-day the wide, sloping lawn, uncut by gravel-walk or wheel-marks, the houseless grove of forest-trees, and the long, curving sweep of granite wall, flanked by gate-way towers at either end, excite the wonder and the question of the passer-by.

When we leave the rugged masses of the New Hampshire hills and pass into Vermont, we find the mountain-forms characterized by far different features. Vermont is, and perhaps ever will be, the most purely rural of all the older States. Though bordered by Lake Champlain, and pretty well supplied with railways, she seems to be aside from any great thoroughfare, and to hold her greenness nearly unsoiled by the dust of travel and traffic. Between the unyielding granite masses of the White Mountain range on the one side and the Adirondack Wilderness on the other, lies this happy valley of simple contentment, with its mellower soil and gentler water-courses, its thriftier farmers and more numerous herds, its marble ledges, its fertile uplands, and its own mountains of gentler slope and softened outline.

Nearly through the middle runs the Green Mountain range, giving rise to a thousand murmuring rivulets and modest rivers, that lapse down through green-browed hills and crumbling limestone-cliffs and sunny meadows, now turned quickly by a mossy ledge, and now skirting a bit of forest until they lose themselves on the one side in the deep-channeled Connecticut, or on the other in the historic waters of Lake Champlain. Quiet industry, pastoral peace, and home-like comfort—these are the suggestions that impress the mind of the visitor among the valley farms and pleasant villages of the Green Mountain State. Here is a land, one thinks, where wealth will rarely accumulate, and man ought never to decay, whose dwellers may for ever praise

God for the greenness of the hills, the fertility of the soil, the delicious atmosphere, the purity of the streams, and the mellow sunshine.

According to the accepted theory of mountain-formation — that elevated ranges



Confluence of Saco and Swift Rivers, Conway.

have been produced by a sort of tidal-wave of the earth's once plastic crust — the Green Mountains must be the softened undulation that followed the greater billow which crested and broke in Mount Washington and Mount Lafayette, leaving its

form for ever fixed in the abrupt and rugged declivities of the White Hills and the Franconia group. The Green Mountains form the northern portion of what is known as the Appalachian Chain. Their wooded sides obtained for them from the



East Mountain, from Bobbs's Hill, Petersham.

early French settlers the term *Monts Verts*, and from this phrase is derived the name of the State in which they are situated. The continuation of the range through Massachusetts and Connecticut is also known to geographers as the Green

Mountains, but by the inhabitants of those States other names are applied to them —as the Hoosac Mountains, in Massachusetts, for that portion lying near the Connecticut River, and constituting the most elevated portion of the State between this river and the Housatonic; and the Taconic Mountains for the western part of the range, which lies along the New York line. These ranges extend into Vermont near the southwest corner of the State, and join in a continuous line of hills that pass through the western portion of the State nearly to Montpelier. Without attaining very great elevation, these hills form an unbroken water-shed between the affluents of the Connecticut on the east, and the Hudson and Lake Champlain on the west, and about equidistant between them. South from Montpelier two ranges extend—one toward the northeast, nearly parallel with the Connecticut River, dividing the waters flowing east from those flowing west; and the other, which is the higher and more broken, extending nearly north, and near Lake Champlain. Through this range the Onion, Lamoille, and Winooski Rivers make their way toward the lake. Among the principal peaks are Mount Mansfield, Camel's Hump, both situated near Burlington; Killington's, near Rutland; and Ascutney, in Windsor County, near the Connecticut.

Mount Mansfield, the highest of the Green Mountain range, is situated near the northern extremity, about twenty miles, in a direct line east, or a little north of east, from Burlington, on Lake Champlain. This mountain has been less popular among tourists and pleasure-seekers than the White Mountains and the Catskills, principally because its attractions have been little known. The pencil of Gifford has made it familiar to art-lovers; but literature has so far done little toward making its peaks, cliffs, and ravines, known to the general public. That it possesses points of interest and picturesque features quite as worthy the appreciation of lovers of Nature as the White Mountains or the Catskills do, our illustration fully shows. Of recent years, it has been more visited than formerly; and a good hotel at Stowe, five miles from its base, has now every summer its throng of tourists. Mansfield is conveniently reached by rail from Burlington to Waterbury Station, on the Vermont Central Railway; and thence by Concord coaches ten miles to Stowe. From Stowe a carriage-road reaches to the summit of the mountain.

As in the case of nearly all mountains, there is some difference in the various estimates of the height of Mansfield, the most generally accepted statement being 4,348 feet—a few hundred feet in excess of the highest of the Catskills. Popularly, the summit of Mansfield is likened to the up-turned face of a giant, showing the Nose, the Chin, and the Lip. It is not difficult, with a little aid of the imagination, to trace this profile as the mountain is viewed from Stowe. The Nose, so called, has a projection of four hundred feet, and the Chin all the decision of character indicated by a forward thrust of eight hundred feet. The distance from Nose to Chin is a mile and a half.

The ascent of the mountain is not difficult, which the hardy pedestrian would be wise to attempt on foot. Carriages from Stowe make the journey at regular



Glimpse of Lake Champlain, from Mount Mansfield.

periods. The ride up the steep roadway is full of interest, the changing views affording momentarily new and beautiful pictures. The mountain, until near the summit, is very heavily timbered ; and the glimpses downward, through entanglements of trees into the deep ravines, are full of superb beauty. Neighboring peaks continually change their positions ; lesser ones are no longer obscured by their taller brothers ; while successive ravines yawn beneath us. Now the road passes over a terraced solid rock, and now it jolts over the crazy scaffolding of a corduroy-bridge that spans a chasm in the mountain-side ; soon the forest-growths begin to thin out perceptibly ; and at last we reach the Summit House, amid masses of bare rocks, at the foot of the huge cliff known as the Nose.

The path up the Nose, on its western side, is quite as rugged as the ordinary climber will wish ; but, with the help of the cable, its ascent may be accomplished. The view from the top is one of the finest in our country. To the eastward are the White Mountains, dwindled by distance. The isolated and symmetrical form of Ascutney rises to the southeast. Southward are Camel's Hump and Killington's Peak, and innumerable smaller elevations of the Green Mountain range—respectable heights, but here losing much of their individual importance amid these surroundings. Westward lie the lowlands with sparkling streams winding among the farms and forests ; and beyond them the blue expanse of Lake Champlain with the misty ridges of the Adirondacks serrating the distant horizon. Far northward are Jay Peak and Owl's Head, the stately St. Lawrence, the spires of Montreal, a score of nameless mountains, and the shining waters of Lake Memphremagog. Oftentimes the observer from the top of Mount Mansfield finds the view on every side shut in by a dense gray vapor, but, when the misty veil lifts, the scene is one of unsurpassable beauty.

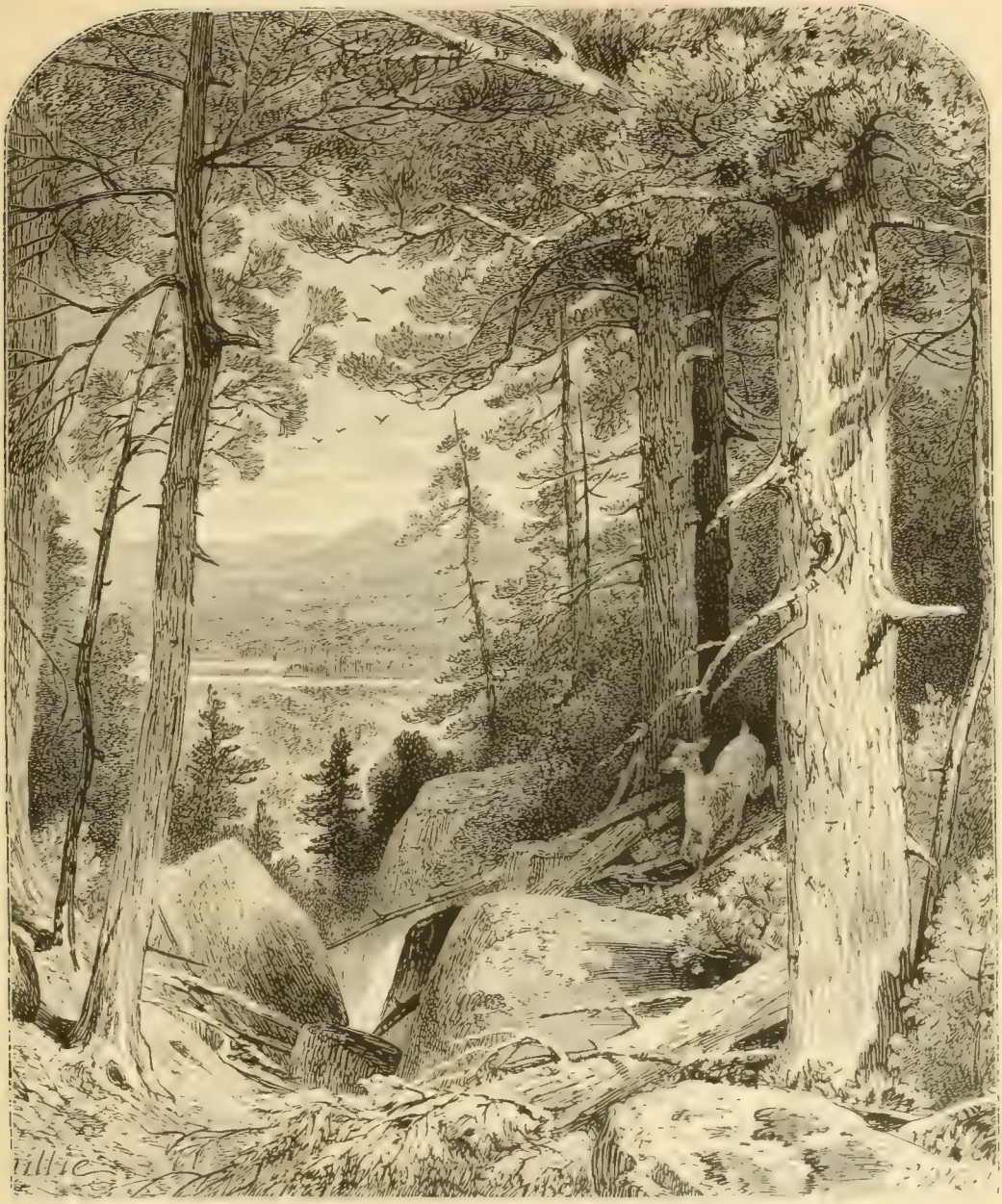
Smugglers' Notch is one of the most interesting features of this mountain. In the far West this notch would be called a cañon. It differs from the cañons of the Sierras mainly in being more picturesque and beautiful—not so ruggedly grand as those rocky walls, it must be understood, but the abundant moisture has filled it with superb forest-growths, has covered all the rocks with ferns and lichens, and has painted the stone with exquisite tints. The sides of the Notch mount to an altitude of about a thousand feet, the upper verge of the cliffs rising above the fringe of mountain-trees that cling to their sides. The floor of the Notch is covered with immense bowlders and fallen masses of rocks, which in this half-lighted vault have partly crumbled, and given foothold for vegetation. Mosses and ferns cover them, and in many instances great trees have found nourishment in the crevices ; sometimes huge, gnarled roots encircling the rocks like immense anacondas. The painter could find no more delightful studies in color than this scene affords. At the time visited by the artist there had been a three days' rain. The stream that flowed through the gorge was swollen into a torrent. Over the top of every cliff came pouring extemporized water-falls and cascades, while the foliage, of fairly tropical abundance, shone with a brilliant intensity of green. Smugglers' Notch has a hundred poetical charms

that deserve for it a better name. It is so called because once used as a hiding-place for goods smuggled over the Canada border.

The Adirondack Mountains, whose tops may be easily descried on a clear day from the summit of Mansfield, inclose one of the most picturesque and delightful regions in North America—a region which has of late years attracted great numbers of visitors, who find, in its bracing atmosphere and fine scenery, charms which fully recompense them for the trifling fatigue and exposure necessary in surveying its beautiful wilds. This remarkable tract, unknown thirty years ago except to a few lumbermen and trappers, lies between Lakes George and Champlain on the east, and the St. Lawrence on the northwest. Five ranges of mountains traverse this region from southwest to northeast. Though none of the peaks attain the height of the loftiest summits of the White Mountains, or the Black Mountain of North Carolina, the average elevation surpasses that of any range east of the Rocky Mountains. The entire number of mountains in this region, which in area exceeds the State of Connecticut, is supposed to be not less than five hundred. The highest of these peaks are known as Tahawus or Marcy, Whiteface, Dix, Seward, Colden, McIntyre, Santanoni, Snowy Mountain, and Pharaoh, all of them being more than five thousand feet in height. They are all wild, savage, and clothed in primeval forest, except on the stony peaks, where mosses, grasses, and dwarf-plants only are found. These highest summits are supposed by geologists to be the first land on the globe which showed itself above the waters, belonging to what is known as the Laurentian formation.

Scattered through these mountains lie more than a thousand beautiful lakes and ponds, occupying a general level of about fifteen hundred feet above the sea—the highest of them, Avalanche Lake, being more than twice that elevation. Some of these beautiful sheets of water are twenty miles long, while others only cover a few acres. Steep, densely-wooded mountains rise from their very verge; picturesque bays and points vary their outlines; foaming brooks tumble in on every side in cascades or through ravines; and the lake-shallows are fringed with grasses and flowering plants; sometimes, indeed, blooming in acres of water-lilies. So lovely and romantic, indeed, are all the features of the scenery, that we should have to wander far to find its match. An American artist, traveling in Switzerland some years ago, wrote home that, having journeyed over all Switzerland and the Rhine and Rhône regions, he had not met with scenery which, judged from a purely artistic point of view, combined so many beauties in connection with so much grandeur as the lakes, mountains, and forests of the Adirondack region presented to the gazer's eye. The grand labyrinth of lakes is intertwined by an intricate system of rivers and brooks. The Saranac, the Ausable, the Boquet, and the Raquette rise in and flow through this wilderness, and in its most gloomy recesses are found the springs of the Hudson.

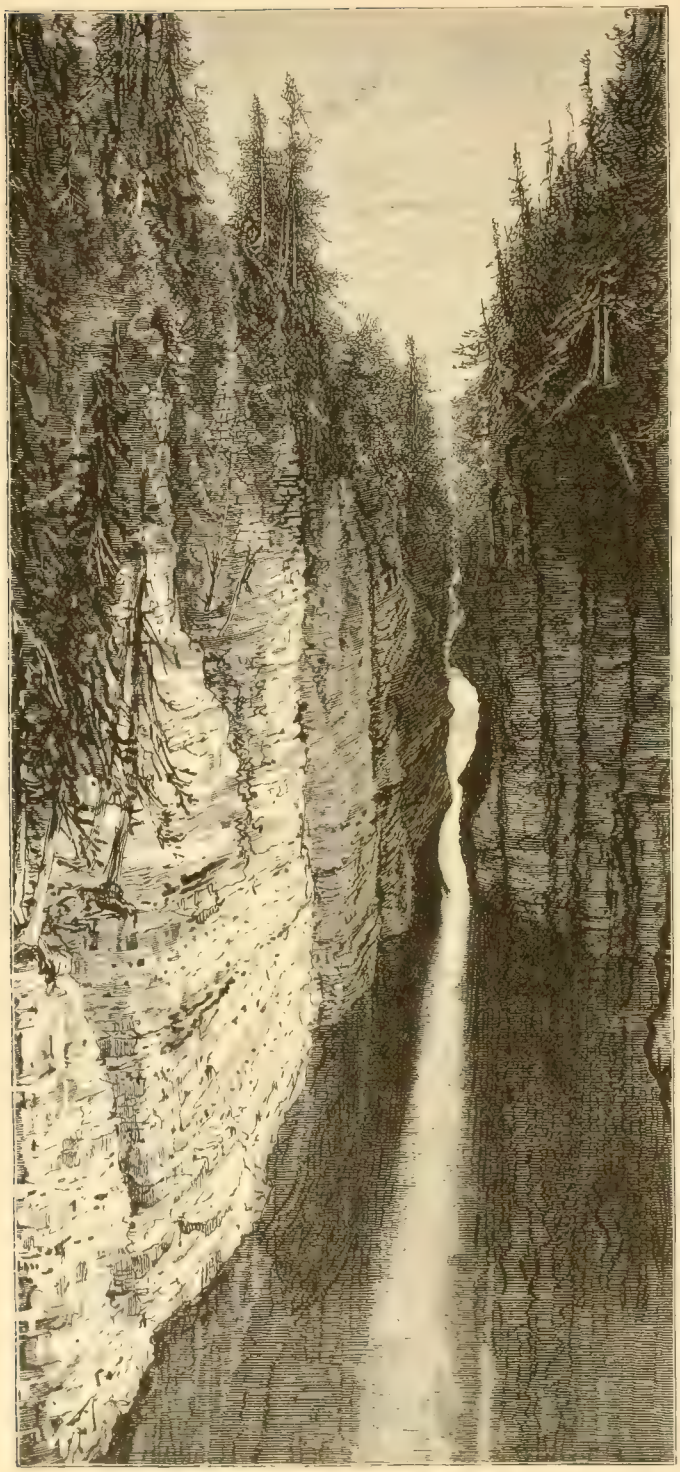
With the exception of the meadows on the rivers, and the broad expanses of the lakes and ponds, the whole surface of the North Wilderness, as the region is often called, is covered with a tangled forest. In these woods and mountain solitudes are found the panther, the black bear, the wolf, the wild-cat, the lynx, and the wolverene,



The Adirondack Woods.

while deer and every variety of small game tempts the skill and enterprise of the hunter. The lakes and brooks swarm with trout, in many cases of large size, the salmon-trout of the lakes often reaching the weight of twenty pounds. Not more than one third of this grand wilderness has yet been fully explored.

The Adirondack region is full of curiosities, which perplex the scientific man and



The Ausable Chasm.

delight the eye of the intelligent tourist. There is, for example, Lake Paradox, whose outlet in high water flows into the lake. There is a pond on the summit of Mount Joseph whose rim is close to the verge of the descent. On the top of Wallface are three lakes, which discharge their waters into the St. Lawrence by the Cold and Raquette Rivers, into Lake Champlain by the Ausable, and into the Atlantic by the Hudson. The enormous rocks of the Indian Pass stand on sharp edges and steep slopes, and look so uncertain that the very deer, in rubbing off their yearly antlers against them, might topple them headlong. Yet they defy all the agencies of Nature, and are plumed with magnificent trees, and in the intricacies of the caverns underneath them unmelted ice gleams all the year through. Throughout all this wild country various springs and brooks commingle their waters and dash over cliffs in charming cascades, which seem a perfect lace-work of shining spray.

Among the most striking scenes in this region are the Chasm of the Ausable and the Indian Pass,

both of which are well described by the poet Alfred B. Street, who has contributed so much to the literature of the Adirondacks. Of the former he writes:

"At North Elba we crossed a bridge where the Ausable came winding down, and then followed its bank to the northeast, over a good, hard wheel-track, generally descending, with the thick woods almost continually around us, and the little river shooting darts of light at us through the leaves. At length a broad summit rising to a taller one broke above the foliage at our right, and at the same time a gigantic mass of rock and forest saluted us on our left, the giant portals of the Notch. We entered. The pass suddenly shrank, pressing the rocky river and rough road close together. It was a chasm cloven boldly through the flank of Whiteface. On each side towered the mountains, but at our left the range rose in still sublimer altitude with grand precipices like a majestic wall, or a line of palisades climbing sheer from the half-way forest upward. The crowded rows of pines along the broken and wavy crest were diminished to a mere fringe. The whole prospect except the rocks was dark with the thickest, wildest woods. As we rode slowly through the still narrowing gorge, the mountain soared higher and higher, as if to scale the clouds, presenting truly a terrific majesty. I shrank within myself; I seemed to dwindle beneath it. Something akin to dread pervaded the scene. The mountains appeared knitting their brows into one threatening frown at our daring intrusion into their stately solitudes. Nothing seemed native to the awful landscape, but the plunge of the torrent and the scream of the eagle. Even the wild, shy deer drinking at the stream would have been out of keeping. Below at our left the dark Ausable dashed onward with hoarse, foreboding murmurs, in harmony with the loneliness and wildness of the spot."

The Indian Pass is a striking gorge in the wildest part of the mountains, which the Indians rightly named the Dismal Wilderness. But few portions of it have been visited by white men, and it is still the secure lair of the larger wild beasts, such as the bear, the panther, and the great gray wolf. Here in the center of the pass are the ice-like springs of the Ausable, which flows into Lake Champlain, and whose waters reach the St. Lawrence and thence the ocean, several hundred miles from the mouth of the Hudson; yet so close are the springs of the two rivers that the wild-cat drinking the waters of the one may bathe his hind-feet in the other. The main stream of the Ausable flows from the northeast portal of the pass, and the main stream of the Hudson from the southwest.

Mr. Street thus speaks of the view from the top of Mount Marcy, or Tahawus, to reach which is a dangerous and difficult climb:

"What a multitude of peaks! The whole horizon is full to repletion. As a guide said, 'Where there wasn't a big peak a little one was stuck up.' Really true; and how savage, how wild! Close on my right rises Haystack, a truncated cone, the top shaved apparently to a smooth level. To the west soars the sublime slope of Mount Colden, with McIntyre looking over its shoulder; a little above point the purple peaks of Mount Seward, a grand mountain cathedral, with the tops of Mounts

Henderson and Santanoni in misty sapphire. At the southwest shimmers a dreary summit—Blue Mountain; while to the south stands the near and lesser top of Skylight. Beyond at the southeast wave the stern crests of Boreas Mountain. Thence



Gothic Mountain, from Ausable Lake.

ascends the Dial with its leaning cone like the tower of Pisa; and close to it swells the majesty of Dix's Peak, shaped like a slumbering lion. Thence stagger the wild, savage, splintered tops of Gothic Mountain at the Lower Ausable Pond—a ragged

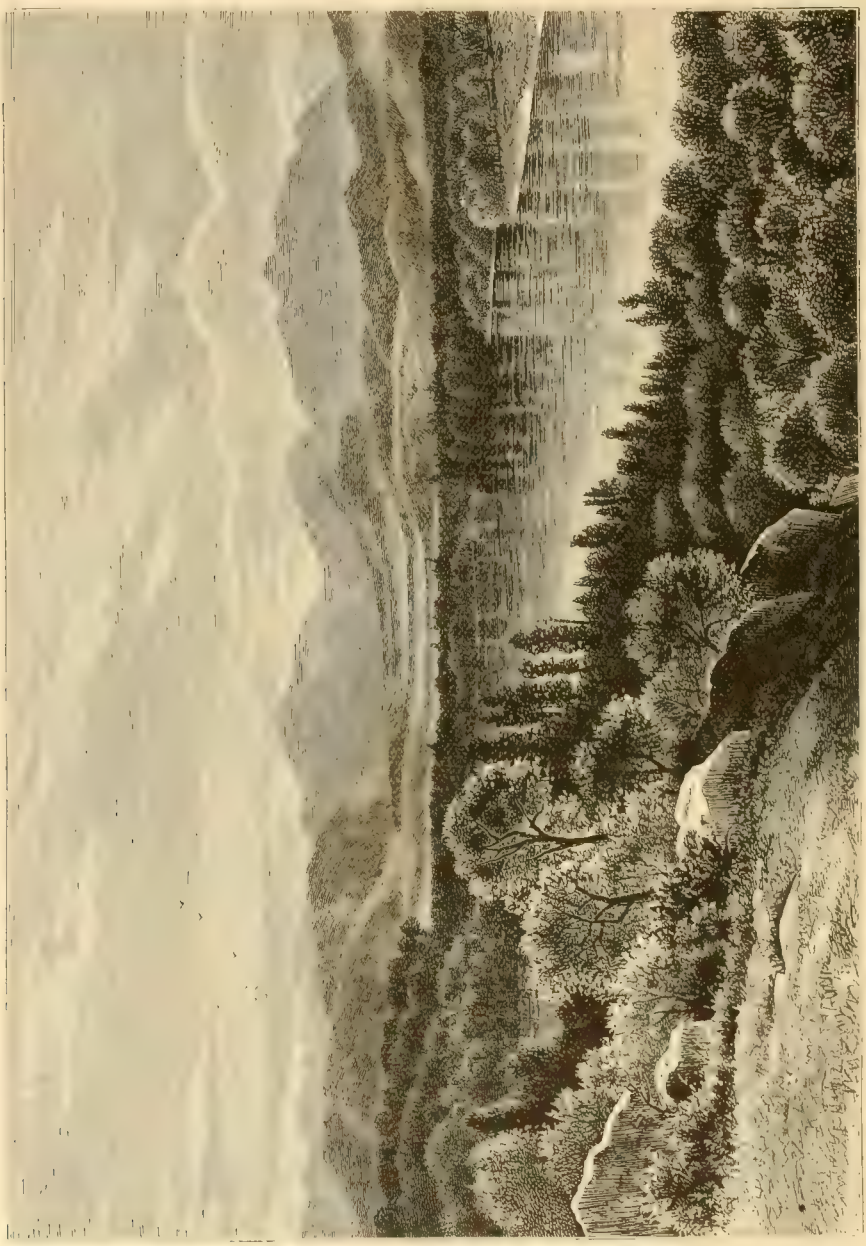
thunder-cloud — linking themselves on the east with the Noon-mark and Roger's Mountains, that watch over the valley of Keene. To the northeast rise the Edmonds Pond summits—the mountain-picture closed by the sharp crest of old Whiteface on the north, stately outpost of the Adirondacks. Scattered through this picture are manifold expanses of water—those almost indispensable eyes of a landscape. That glitter at the north by old Whiteface is Lake Placid ; and the spangle Bennet's Pond. Yon streak running south from Mount Seward, as if a silver vein had been opened in the stern mountain, is Long Lake ; and between it and our vision shine Lakes Henderson and Sanford, with the sparkles of Lakes Harkness and the twin-lakes Jamie and Sallie. At the southwest glances beautiful Boreas Pond with its green beaver meadow and a mass of rock at the edge. To the southeast glisten the Upper and Lower Ausable Ponds ; and farther off, in the same direction, Mud and Clear Ponds by the Dial and Dix's Peak. But what is that long, long gleam at the east ? Lake Champlain ! And that glittering lake north ? The St. Lawrence above the dark sea of the Canadian woods ! "

A little more than a quarter of a century since, Adirondack, as this region is often called, was almost as unknown a land as the heart of Africa. But of late years a regular stream of tourists and sportsmen has yearly poured into this picturesque and most interesting wilderness. In summer the innumerable lakes are skimmed by the boats of travelers in search of game, of health, or of the beautiful in Nature. All traveling here is done by boats of small size and slight build, rowed by a single guide, and made so light that the fairy craft can be lifted from the water and carried on the shoulders from pond to pond. By thus making portages, or carries, as these journeys from lake to lake and from stream to stream are called, one may travel through the whole length of the great Adirondack wilderness. Competent guides, who will supply boats, tents, etc., may always be had at the taverns, which are regular " intelligence-offices " for the hardy woodsmen. The fare on which the Adirondack traveler lives for the most part consists of trout and venison, than which there is no more epicurean food when cooked by woodland skill and sauced with a woodland appetite. All the essential needs of an outfit for a two months' trip in the woods are included in the following articles : A complete undersuit of woolen or flannel, with a change ; stout trousers, vest, and coat ; a felt hat ; two pairs of woolen stockings ; a pair of common winter boots and camp-shoes ; a rubber blanket or coat ; a rifle, hunting-knife, belt, and pint tin cup ; a pair of warm blankets, towel, soap, etc. Thus equipped, one fond of out-door life may spend a month or two in the wild woods, and only regret when he is obliged to return to civilized life again.

The lakes in the Adirondack region are all so charming and picturesque that it is difficult to single any out as bearing off the palm. Those best known are Upper and Lower Saranac Lakes, Tupper and Little Tupper Lakes, Lake Placid, Round Lake, St. Regis Lake, and Long Lake. Each of them has its own characteristic beauties, and appeals in its own way to the lover of the beautiful.

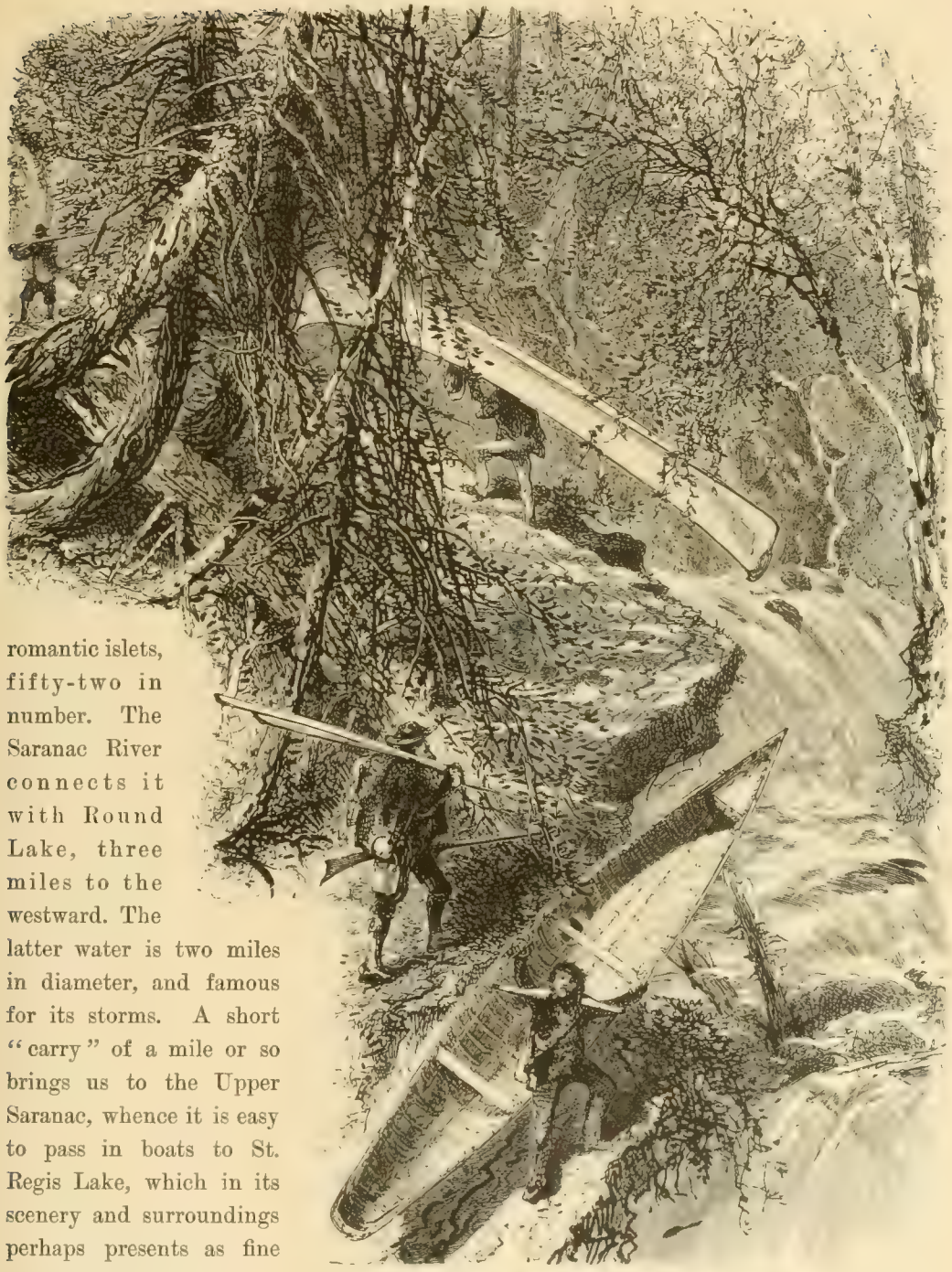
The most popular and direct route to the wilderness is from Port Kent, on Lake

Champlain, to Keeseville, a distance of about six miles. Thence the traveler may pass to Martin's, on the Lower Saranac, a great part of the way being in sight of



The Adirondacks, from Placid Lake.

Whiteface Mountain, the second loftiest peak of these noble hills. At the foot of Whiteface lies Placid Lake, a lovely sheet of water, and a favorite summer resort. The Lower Saranac Lake is seven miles long by two in width, and studded with



A Carry near Little Tupper Lake.

romantic islets, fifty-two in number. The Saranac River connects it with Round Lake, three miles to the westward. The latter water is two miles in diameter, and famous for its storms. A short "carry" of a mile or so brings us to the Upper Saranac, whence it is easy to pass in boats to St. Regis Lake, which in its scenery and surroundings perhaps presents as fine an example of the general characteristics of the Adirondack region as any lake in the whole chain. A short voyage in the opposite direction, on the Lower Saranac Lake, and a carry, lead us to the Raquette River.

the great artery of the wilderness. A row of a few hours down the Raquette brings us to the outlet of Tupper Lake. At the head of this lake, which is exceedingly picturesque and full of rocky, tree-embowered islands, we find the wild and little explored Bog River, which flows into the lake over a romantic cascade, one of the great attractions of the region, and a famous place for big brook-trout. Up Bog River, through a series of ponds and an occasional carry, we pass to Little Tupper Lake, and thence another series of ponds and carries leads to Long Lake, that for twenty miles reminds one of a great river. From this lake there is a noble view of Mount Seward, which is 4,348 feet high.

Such is the most frequented route in the great wilderness of Northern New York, and one which may be pursued with the minimum of personal discomfort even by fair-weather explorers. For hardy and daring sportsmen, who long for still wilder scenes, the Adirondack country offers innumerable paths, and just enough peril to sharpen the taste for adventure. To penetrate into unfrequented regions, unknown even to the guides themselves, and pursue a track only pressed by the stealthy footfall of the panther, the bear, and the wolf, is a privilege which one need not sigh for in vain in this primeval stretch of lake, river, forest, and mountain. To gratify such an appetite is delightful to the few eager and venturesome spirits, but, for the majority of those who visit the "North Woods," a sojourn that does not take them far away from the comfortable taverns which are found on all the well-known lakes suffices. For here they may sate their eyes on most picturesque and romantic scenery, and enjoy the fascinations of forest-life without cutting entirely loose from the comforts of civilization.

Some of the finest bits of mountain scenery to be found in the United States, perhaps in the world, exist in the Catskills, which is a kind of spur of the great chain which runs along the eastern shore of North America. This cluster of picturesque mountains is situated about one hundred and forty miles north of the sea, and about eight miles west of the Hudson River. The Catskill region is something less than a hundred miles south from the Adirondacks, and, while it does not offer the same wonderful variety of scenery, it has characteristic beauties of its own, which do not yield to any of its rivals. Though some passing account of the Catskill Mountains was given in our sketch of inland summer resorts, it will be of further interest to glance briefly again at these beautiful mountains. On their eastern slope they rise in bold grandeur to a height of more than four thousand feet, while on the west they slope away gradually till they are lost in mere hills.

One of the most striking features of the prospect from the upper heights of the Catskills is found in the strange landscape-effects. This is peculiarly the case when the sun rises over the distant hills, and the valley is filled with clouds that lie massed a thousand feet below you. The effect is then that of an Arctic sea of ice, tossing back a thousand splinters of rainbow-light. Then, again, the Swiss Alps present no more charming vision than when the light of sunset falls from behind the Catskills upon huge masses of cumulus clouds, heaped upon one another like peaks of snow.

Daily the scene changes with the hours, always revealing some new beauties.

Perhaps the most famous feature of the region is the fall of the Catterskill. On the high tableland of the North and South Mountains are two lakes, buried in a dense forest. A little brook makes its way from these lakes westward along the shoulders of the mountain, and finally reaches the edge of a very steep precipice, over which it leaps into a deep pool in the center of a rocky amphitheatre. Gathering its strength again, the torrent dashes a second time over huge bowlders, fallen from the ledge above, which churn it into foam as it falls in headlong fury. Tumbling from one ledge to another it at length reaches the bottom of the glen, when, meeting another stream, the mingled waters hurry down their rocky course, until, swollen into considerable width, they glide placidly into the Hudson at the village of Catskill. There can be nothing more beautiful than this cascade as it springs from the lofty height and tumbles into the hollow basin below. The strata of which the



Catterskill Falls.

mountain is formed lie horizontally on each other, and through them the water has sawed its way. Above the margin of the pool, in which the water from the cascade beats so furiously, we find a pathway worn out of the soft rock, and extending all around the fall. Sometimes, when the stream is swollen, the shoot of the cataract will be far beyond you as you stand on this pathway, and then the effect is exquisite. A dancing rainbow keeps step with you as you crawl around under the rock beneath the waters. Here, too, you get a fine view of the edges of the ravine or clove down which the water descends, and can mark the weird figures of the pines as they hug the edges of the cliffs, and lift their black spears against the sky.

On the edge of the precipice, close to where the fall makes its plunge, there is a tree growing out of the crevice and jutting over the abyss. Here you are told a legend of a daring young woman, who crept out on the rock, and, clasping the tree with her hands, swung her body far out over the abyss. The gorge through which this waterfall tumbles is wild in the extreme. On both sides the mountains, densely clad with trees, rise almost perpendicularly, and the ceaseless roar of the torrent resounds far among the rocks.

The South Mountain, on which the Catskill Mountain House stands, offers many a beautiful ramble, whereby we may see curious or picturesque aspects of nature. Among these may be singled out a vault-like passage, to which has been given the name of Pudding-stone Hall. Much of the surface of the mountain consists of a bed of pudding-stone or conglomerate. Some convulsion of nature has riven off an enormous block of this, and between it and the solid rock is a passage, several feet in width, to which the quaint name given above has been attached. Your path compels you to pass through this dark, fern-clad chasm, through which the dripping water falls, and at the end you climb up on rude stones to the top of the ledge. You are now high above the level of the Mountain House, and the view is much more extensive than the celebrated prospect from the piazza of that hotel. With a good glass you can easily see the Capitol, at Albany, glittering forty miles away. A delightful walk brings us at last to Indian Head, a bald promontory which juts out over Catterskill Clove, overhanging the bed of a tumbling mountain-stream, called the Catterskill. Here the mountain falls, almost in a plumb-line, nearly two thousand feet, and through the shrubbery growing out of the cliff we get vanishing glimpses of far-reaching landscapes, bathed in warm sunlight. Perhaps on the head of High Peak we see a heavy pall of clouds, which darkens the mighty shoulders of the mountain and the gorge beneath. Across this mass of clouds there is a brilliant play of color and dancing sunlight on the rocks and grassy slopes, while the dash of the cascade comes roaring up to us from the glen far below.

Across the clove, or ravine, of which we get a splendid prospect from Indian Head, there runs a light bridge, apparently too frail to support the lumbering coaches which cross it. Underneath this the Catterskill plunges furiously over the rocks, and then falls over a succession of ledges beneath. On one side the cliff, looking like the wall of a great mediæval castle, towers in the air, while on the other side the spurs of the



Sunset Rock.

South Mountain, densely covered with trees, rise rapidly more than fifteen hundred feet. Few more romantic spots can be found than that known as Sunset Rock, where you look westward up the clove. On the top of the broad, flat rock, which projects far over the precipice, stands, at the very verge, an old pine-tree, as a sentinel. In front of, and behind you, the mountain pushes up huge gray cliffs, bald and ragged, far out over the glen, and then falls, in broken lines, a frowning precipice. The lines of South Mountain, and of the spurs of High Peak and Round Top, blend so gently together, as they meet, that it is difficult to trace the bed of the Cauterskill. Directly in front of you the table-land, formed by the shoulders of the mountain, rolls off toward the westward, where the sharp lines of Hunter Mountain define themselves among the other peaks.

The Five Cascades of the Catterskill Clove are of great beauty. Here the stream, after making its first plunge, jumps over a series of ledges, from ten to forty feet in height, that lead like steps down the ravine. There are, in reality, hundreds of these little falls; but the first five are specially striking. A spot in the mountains which has attracted special admiration for the wildness of its scenery is the pass of Stony Clove. Here it is always dark and cool, and even in mid-August you will find ice among the crevices of the rocks which have fallen in great numbers from the cliffs above. Such are a few of the attractions of the Catskill region, though there are countless walks and drives which reveal scenery not a whit less beautiful.

The great mountain system which we have been briefly viewing, under the local names of the White Mountains, Green Mountains, Adirondacks, and Catskills, passes southward, and, when it reaches Pennsylvania and the more southern States, it becomes known as the Blue Ridge. This name arises from the even tinting of their forest-clad slopes, which melt softly into the atmosphere in the most delicate and translucent blue.

One of the outlying spurs or roots which unite afterward, in a series of connecting links across Pennsylvania, in the Blue Ridge of Virginia, begins in Orange County, New York, not far from the Catskills, and stretches in a southwesterly direction across New Jersey. This is known as the Kittatinny or Blue Mountain. When it reaches a spot near the junction of New York, New Jersey, and Pennsylvania, the scenery increases in beauty, and attains its culmination in what is known as the Delaware Water-Gap. Here the Delaware River, which is made up of little streams rising on the western declivity of the Catskills, turns abruptly into the mountain, which opens to give it passage in a grand cañon or defile. The country north of the Blue Ridge, and above the Gap, bore the Indian title of *Minisink*, or "Whence the waters are gone." Here was probably once a vast lake; and whether the water wore its way through the mountain by a great cataract like Niagara, or burst through a gorge, or whether the mountains were lifted up on its margin, it is certain that the whole country bears the marks of aqueous action.

The two great mountains which form the boundaries of the Gap have been well named. The one on the Pennsylvania side is *Minsi*, in memory of the Indians who



Delaware Water Gap.

made Minisink their hunting-ground. The more rugged and rocky cliff on the New Jersey side bears the name of *Tammany*, after the great Indian chieftain who ruled the Delaware confederacy, who made the treaty with William Penn, and who has also transmitted his name in the political traditions of New York City. The bold face of Tammany exhibits great frowning masses of naked rock, while the wooded sides of Minsi show dense thickets of evergreen. Mount Minsi owes much of its gentle beauty to the charming streams of water that descend its sides beneath a dense foliage, which veils the mossy pools and fern-draped cascades from the sunlight into a cool twilight. Successive ledges mark the face of the mountain, and on the lowest of these, about two hundred feet above the river, stands the old and well-known hotel, the Kittatinny House. The stream that issues beneath the hotel comes down the mountain-side through a dark ravine, and falls in a cascade into the river. Rhododendrons fringe the sides with the loveliest foliage and blossoms. The whole course of the stream is marked by cascades and water-falls, and, to those who have followed its devious way through the shaded ravine, the fairy glens and grottoes must return in dreams, for to dream-land alone does such witching beauty belong.

Not only is the interior of the Gap of such striking beauty, but outside of its limits the region is full of grand scenery. From the mountain-peaks on every side magnificent vistas open, and from the river above and below the chasm the views are of marvelous extent. Spurs jutting out from the main ridge give endless variety to the landscape, while hollows, gaps, and ravines add the most charming diversity.

Several miles above the Gap a mountain-stream, called the Bushkill, flows into the Delaware. On this brawling river are several water-falls, one of which is singularly fine. A chasm one hundred feet in height is surrounded on three sides by an almost perpendicular wall of rock, over which the water dashes. From below the scene is grand and somber in its magnificence, as the swift torrent striking midway on a projecting ledge rebounds in a mass of snowy foam, and then falls into the dark chamber of rock below. On the walls of the chasm, at a level with the summit, there is another scene of great beauty as the swift stream emerges from the dark forest to make its sudden plunge. Another mountain-stream near by has two picturesque cascades, Buttermilk and Marshall Falls. The latter plunges down a chasm fifty feet in depth, having a veil of overhanging rock in front, through which one gazes at the gloomy cataract as through a curtained casement. All through this region the red-men had a favorite abode, as may be inferred from the number of Indian graves, and the great quantity of spear and arrow heads, hammers, axes, and tomahawks, rude cutting instruments, bowls and pestles of stone, and earthenware jars.

Among the wonders of the Gap must be mentioned the remarkable lake on Mount Tammany, a lake to whose strangeness popular tradition has added a touch by declaring it unfathomable. After splitting the very mountain to its base, Nature placed here, by the side of the chasm, on the apex of the lofty peak, a placid and lovely little lake. Masses of bare gray rock encircle the margin, and within this deso-

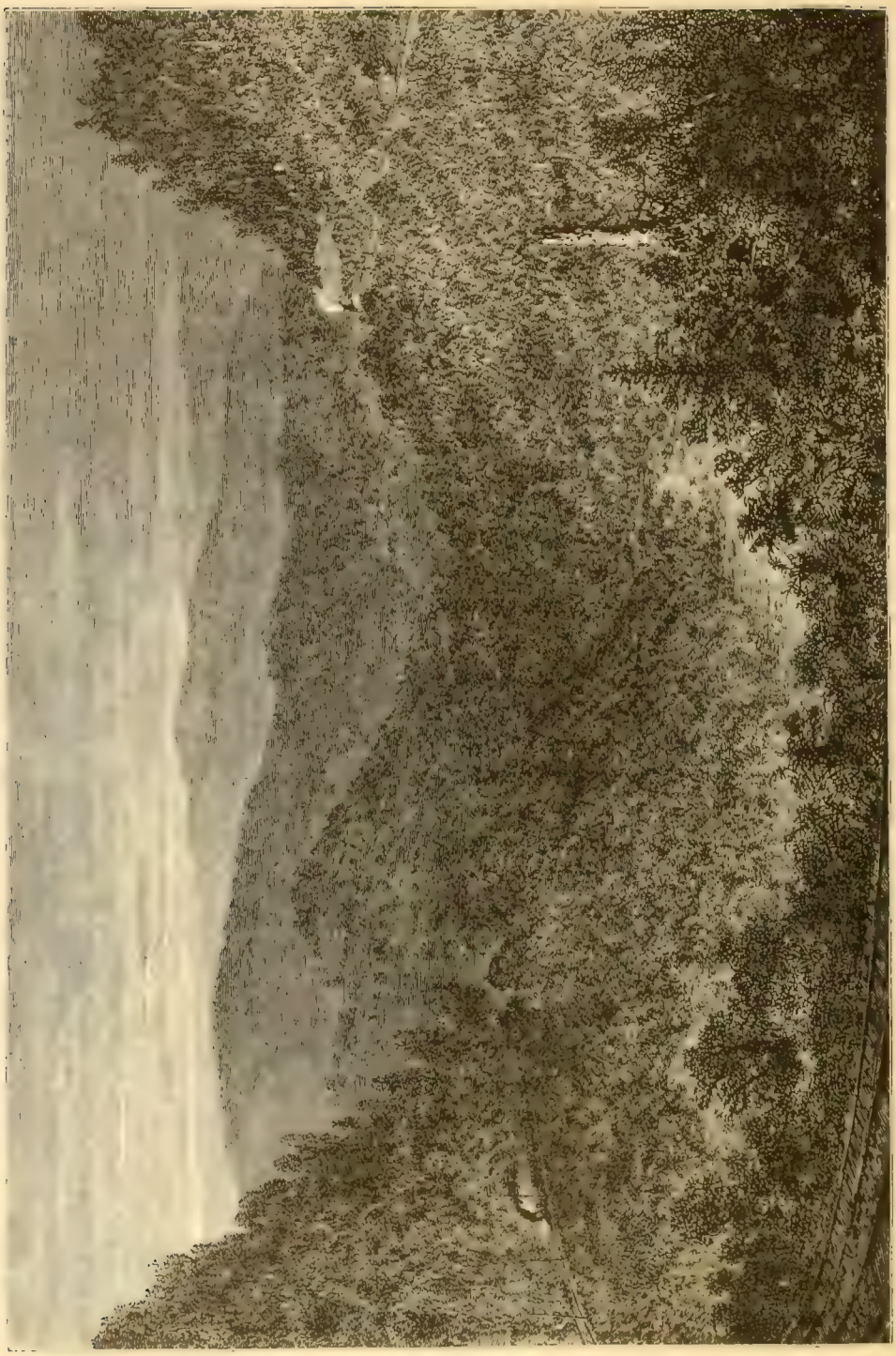
late ring the mirror-like water reflects alone the swiftly darting birds or the slowly sailing clouds, for nothing else intervenes between water and sky. Near this lonely lake, in a cleft of the rock, is a single Indian grave, and we may fancy it the place of sepulture for some king, poet, or prophet of the red-men, thus interred in reverent isolation from the graves of his race.

There are interesting traditions of the tribes—a portion of the great confederacy of the Lenni-Lenape, which once ruled from the lakes of Northern New York to the middle of Pennsylvania, who occupied this section when the first white settlers made a lodgment, and William Penn and his followers accomplished by swindling what other pale-face intruders achieved by force of arms. One of the stories of the purchase of land by the whites in the Minisink Valley is something as follows:

According to the native custom, the territory sold was always measured by the distance which could be walked in a certain specified time. According to the Indian fashion, the walkers loitered, rested, or smoked by the way, as they felt disposed. But in this case a sharp bargain was determined on. Offers were advertised promising five hundred acres of choice land and a further stipend in money to the swiftest walkers. Three were chosen, noted for their pedestrian exploits. The boundaries of the territory bought were to be fixed by walking for a day and a half from a certain chestnut-tree at Wrightstown meeting-house. Both the interested sides had a large number of spectators to watch the performance of the walkers. One of the white contestants walked without pause and with great rapidity, a fact which very much disgusted the Indians, who cried angrily as they saw his swift and unceasing strides: "No sit down to smoke; no shoot squirrel; but *lun, lun, lun,* all day." The distance traversed was eighty-six miles, the walking time being eighteen hours.

This exploit so enraged the red-men that they refused to complete the bargain, and prevented the settlement of the tract by armed resistance; and it was a bloody ground for twenty-seven years. In 1740 the settlers near the Gap, to hold their own, were obliged to apply for assistance from the provincial government; and again in 1763 a petition was sent for help, as "we lie entirely open to the mercy of those barbarous savage Indians." In many cases the farmers abandoned their homes, and their unharvested crops were burned by the Indians. The Indian hero of the war was the Delaware chief named Sadenskung, who had already been baptized by the Moravians, and known as the friend of the whites; but the fraud practiced on his people made him an implacable foe. In 1756 this chief, as the representative of four nations, made the following speech to a council of the whites at Easton:

"My people have not far to go for reasons for the war. The very ground on which I stamp my foot was my land and my inheritance, and has been taken from me by fraud; yes, for it is fraud when one man buys land of us and takes a deed of it and dies; and then the children make a false deed of it like the true one, and put our Indian names to it, and take from us what we never sold. This is fraud. It is fraud, too, when one king has land beyond the river, and another king has land on this side, both bounded by rivers, mountains, and springs, that can not be



View from Horseshoe Curve, Kittanning Point (Early Morning).

moved, and those greedy of land buy of one king what belongs to the other. This, too, is fraud."

This Indian chieftain at another time sent four strings of wampum to Governor Morris, with a separate message to each: "One to brush the thorns from the governor's legs; another to rub the dust out of the governor's eyes, to help him to see clearly; another to open the governor's ears, that he may hear plainly; and the fourth to clear the governor's throat, that he may speak plainly."

The Delaware Water-Gap itself was long a forbidden chasm, dreaded and avoided by travelers, unless chance or necessity compelled them to thread the defile by the Indian trail, which formed a circuitous and dangerous way among the rocks piled up in Nature's masonry. It was not till 1800 that a wagon-road was constructed through it.

The surface of Pennsylvania is level in the southeast, hilly and mountainous in the interior, and rolling or broken in the west. The mountains make a series of parallel ridges from fifteen hundred to twenty-five hundred feet in height, and traverse the State in a gently curving belt from northeast to southwest, the width being from fifty to eighty miles and the length two hundred miles. The most easterly, known under the local name of South Mountain, is a prolongation of the Blue Ridge of Virginia, and the most westerly ridge, which is the highest, is the Alleghany Mountain, from which there is a continuous slope to the Ohio River, though this Ohio table-land is crossed by two well-defined ridges, Laurel and Chestnut. This slope furnishes much of the best arable land in the State, though the ridges east of the Alleghanies are too steep for cultivation. They are, however, rich in coal and iron, and furnish the wonderful industrial resources which have made Pennsylvania the greatest manufacturing State in the country.

The Susquehanna River drains portions of the central highlands of the State through tortuous cañons a thousand feet deep, and collects in a central valley or rolling plain which separates the group of anthracite-coal mountains on the east from the wilderness of round tops on the west, belonging to an older formation, through which the Juniata River and its branches break by numerous narrows or short gaps. The anthracite mountains, which enter so largely into the industrial value of the State, form an elevated plateau, called the Pocono Mountain, which continues in New York State as the Catskills, and through this plateau the Delaware River flows in a deep cañon. The various ridges which make up the complex system of Pennsylvania highlands are distinguished by various local names, such as North, Blue, Kittatinny, Second, Peter's, Berry's, Mauch Chunk, Sharp, Locust, Mahantango, Shamokin, Shickshinny, Wyoming, Hell's Kitchen, McCauley's, Buffalo, Standing Stone, Bald Eagle, Dunning, Savage, Black Log, Tuscarora, Path-valley Mountain, etc.

The valleys of Central Pennsylvania correspond to the mountain-ridges in their general direction, and are crossed by the great rivers which pass to the sea by a series of zigzags. The principal of these valleys are Chester in the southeast, Lebanon in the east, Wyoming in the northeast, Penn's and Juniata in the center, Cumber-

land in the south, and Monongahela Valley in the southwest. Perhaps no better type of the most characteristic mountain-scenery of the State can be found than in the course of the Juniata River, which flows in a narrow valley from the west till it pours into the Susquehanna fourteen miles above Harrisburg. It is about a hundred and fifty miles long, and its banks are followed by the Pennsylvania Canal and Railroad. The sources of the river are in the Alleghany Mountains, and it breaks through all the intermediate mountain-ridges in passes, ravines, and gulches of the most picturesque and romantic beauty, which have long been the theme of the poet's song and the artist's brush.

Massiveness, softness of outline, and variety are the distinguishing peculiarities of the Juniata scenery. The little river breaks through its obstacles by both strategy and force. At many places it seems to have dashed boldly against the wall and to have torn it asunder. Again it winds around the obstruction through secret valleys and secluded glens. At some points the mountains appear to have retired from the attacking current, leaving isolated hills to stand like sentinels. But the severed mountains, the towering walls, and the lonely hills are all toned and molded by the action of the elements and the foliage of nature, so that the eye sees but few naked rocks or abrupt precipices. The valleys and many of the lesser hills are brought under cultivation and some of the latter rise in the distance, presenting a checker-work of yellow, green, and brown, showing the progress of agricultural industry, while their summits are crowned with clumps of forest-trees, indicating their woodland luxuriance before they were invaded by the march of civilization. Every change of the seasons, every hour of the day, in fact, gives new tints to these mountains and valleys. The morning mist often hides them with its soft shroud; and, as this is dispersed by the sun, cloud-like forms sail away in the sky, pausing at times amid the higher summits as if to rest before taking their final flight. The hues of evening dye them with gold and purple, while deep shadows sink in the water and creep up the wooded banks. Spring clothes the entire landscape with a tender green. Summer deepens this into a richer tint, and scatters through it the gold of the ripening grain. Autumn dashes its blazing hues over the magnificent forests with a lavish hand, and winter turns the hills into snow giants, over which tower the ever-verdant pines or repose dark beds of rhododendrons. In the river-valley almost every tree has its parasite in a Virginia creeper festooning it from the ground to the topmost branch: and here and there a larger vine binds a number together as if it had grown weary of its first love and taken others to its embrace. At some places the railroad which traverses the valley passes through broad, cultivated openings, and at others it is built along ravines so narrow that its bed is carved out of the overhanging rock. Now a mountain-spur bars the path and is pierced by a tunnel, and again the river is so tortuous that numerous bridges carry the track from bank to bank. Every mile opens up new scenes, which present themselves to the traveler's eye like the changing pictures of the kaleidoscope.

Like the other ridges of the great Appalachian chain, which stretches along the



In the Pack-saddle, on the Conemaugh.

whole Atlantic coast of the United States, the Alleghanies are noticeable, not for their great elevation, nor for their striking peaks, nor for any feature that distinguishes one portion of them from the rest, but for a single uniformity of outline, particularly of that which defines the summits of the mountains, which are always

round and sloping. The greatest width of the mountainous region in Pennsylvania is about one hundred miles, and that of the Alleghanies is twenty-five miles, constituting, indeed, the western and highest wall of the lofty mountain-plateau which extends over the whole central portion of the State. This elevated region is singularly rich in its forest features. Oaks, beeches, maples, and ash-trees, and every variety of evergreens, cover the slopes and summits in lavish profusion. This splendid mountain wilderness, which presents its primeval beauties within a few miles of the towns and villages which line the track of the railway or the courses of the rivers, offers the most fascinating inducements to the sportsman. The streams and brooks are alive with fine trout, while in the forest recesses one does not need to go far to find bears, catamounts, wolverenes, deer, and almost every variety of the furred and feathered tribes.

A few miles west of the city of Altoona, which stands at the east base of the mountains, the western-bound passenger on the Pennsylvania railroad has the privilege of beholding some of the most striking and picturesque scenery to be found in the Alleghanies. Just beyond Altoona the ascent of the mountains begins, and, in the course of the next eleven miles, superb mountain-views contest the attention with the remarkable feats of engineering which were necessary to carry the line of railway across the rocky barriers. Within this distance the roadway mounts to the tunnel at the summit by so steep a grade that, while in the ascent double power is required to move the train, the entire eleven miles of descent are run without steam, the speed of the train being regulated by the brakes. The celebrated Horseshoe Curve is at Kittanning Point. Here the valley separates into two chasms, neither of which is practicable for further progress. By a huge curve, in the shape of a horseshoe, the sides of which run parallel to each other, the railroad crosses both ravines on a high embankment, cuts away the point of the mountain dividing them, sweeps around the great western wall, and leads to a more practicable pass.

A little way beyond Kittanning Point, another splendid mountain-scene is displayed at Allegrippus. There are few, if any, more remarkable spots in the whole Alleghany range. Gazing toward the east (for we are now on the western side of the great mountain-ridge), range after range rises into view, until at last they fade away into the azure of the horizon. No limit but the power of vision bounds the eye-sight. Gradually, as we pass on, the valleys seem to rise and the mountains to sink, until the whole landscape assumes the aspect of a rugged plain, where industry has found a most prosperous home for mines, furnaces, and mills.

From the base of the western slope of the Alleghanies the mountain panorama, though not so bold, perhaps, as on the eastern side, is not less picturesque and striking. The Conemaugh River, which is one of the principal tributaries of the Ohio, the Alleghany and Monongahela being the other two, flows from the western slopes through scenes of the most attractive beauty. One spot along which the Pennsylvania Railroad passes in the valley of the Conemaugh is known as the "Packsaddle." This is a few miles from the town of Bolivar, and the river is narrowed by the closely

approaching mountain-walls. The water flows with great swiftness and turbulence, and the superb lines and curves of the mountains, wooded to their very crests, and the sparkling silver of the river below, make a charming picture, or series of pictures, for, as one progresses along the tortuous route, fresh surprises of scenic effect attract the eye.

Such are a few characteristic scenes from the great Alleghany range of Pennsylvania. One confusing fact in our mountain nomenclature is in the great variety and uncertainty of names as applied to the same ranges in different States, different local titles not only being current, but also a confused application of the main names of the ridges. For example, the Blue Ridge in Virginia is not the same continuous chain with the Blue Ridge of Pennsylvania: and the Alleghany of Virginia becomes, in its two divisions in North Carolina, the Blue Ridge and the Great Smoky. These varieties of title make it a little difficult to fully understand the exact relations of the different divisions of the great Appalachian system, without referring to a map.



Harper's Ferry.

THE MOUNTAINS OF THE SOUTH.

The mountains of Virginia—Harper's Ferry and its surroundings—The Peaks of Otter—North Carolina scenery—The highest mountain of the Atlantic coast—The Linville Range—Mount Pisgah—The French Broad and its beauties—Cherokee traditions—Alum Cave, Smoky Mountain—Cumberland Gap—Lookout Mountain, Tennessee—Mountain-scenery in Georgia—The valley of the Owassa—Tallulah Chasm.

THE highland region of the Southern United States does not yield to the Northern mountains in variety, boldness, and picturesqueness of scenery, and offers to the tourist and traveler charms which are becoming better known every year. The Virginia mountains, of course, have long been famous, a distinction which they owe partly to their accessibility and partly to the numerous mineral springs scattered through them.

noted, since the early days of the republic, for their healing virtues. But, aside from Virginia, the beauties of Southern mountain-scenery have only within a few years begun to attract the capricious footsteps of any large number of visitors. The mountain system of Virginia, which extends in the same general direction from northeast to southwest, may be divided into—1. The coast range, extending along the Atlantic sea-board, west of what is called Tide-water Virginia, and consisting of low spurs of hills stretching from the Potomac River to the borders of North Carolina; 2. The Blue Ridge, a range with many branches expanding into plateaus or rising into domes, comprising a region of about twenty-five hundred square miles, consisting of parallel ridges, detached knobs, and foot-hills, the highest parts of which rise four thousand feet above the level of the sea; and, 3. The Alleghanies, still farther west, which have a length of two hundred and fifty miles, a width of from ten to fifty miles, and an area of nearly eight thousand miles. While the Alleghanies in Pennsylvania are characterized by their irregularity and confusion, they display in Virginia a series of parallel valleys long and narrow, separated by perfectly regular mountain-ranges. The highest peak in the State, however, Balsam Mountain, does not lie in the direct line of either of the two great ranges, but between the Blue Ridge and the Alleghanies in the Iron Mountains, near the border of North Carolina. Between the two great ranges sweeps a magnificent valley from the Potomac to the Holston. It extends for about three hundred and thirty miles, of which some three hundred are within the State of Virginia, and has an area of five thousand miles. This grand mountain plateau—for it is such in effect—embraces the valleys of five rivers, the Shenandoah, James, Roanoke, Kanawha or New, and Holston or Tennessee, and includes within its broad domain much of the most striking and picturesque scenery of the State of Virginia. Between the great main ranges are lower ranges of hills interspersing and breaking up the valley, and known under various local names. These mountains properly belong to either the Blue Ridge or the Alleghanies, but in the current parlance of the people are differently classed.

The Alleghanies form the boundary between Virginia and West Virginia, and rise to an average elevation of about five hundred feet higher than that of the Blue Ridge. Nearly parallel to them and about thirty miles westward is a series of ridges and mountains that may properly be regarded as a continuation of the Cumberland Mountains, which are found at their greatest elevation in the State of Tennessee.

With this general survey of the mountains of Virginia let us glance in detail at some of the more famous mountain-scenes of this fine upland region. First of all comes Harper's Ferry, the great natural gate-way of the two Virginias on the Maryland border. Here the Shenandoah River pours its waters into the Potomac, and the united streams force their passage through the Blue Ridge at a point forty-five miles west of the city of Washington. Thomas Jefferson pronounced the passage of the Potomac through the mountains as "one of the most stupendous scenes in nature, and well worth a voyage across the Atlantic to witness." Though a more thorough exploration of the natural wonders of our country since Jefferson's eulogy has dis-



London Mountain and the Shenandoah.

covered chasms far more wonderful and scenes more sublime, Harper's Ferry in its combination of the beautiful and the grand still remains among the famous places of the country, aside from the historic interest attached to it.

The town of Harper's Ferry is built at the foot of the narrow tongue of land that thrusts itself out like a cut-water separating the Potomac and the Shenandoah, and known as Bolivar Heights. It lies in Jefferson County, West Virginia, and just across the Potomac are Maryland Heights in the State of Maryland, while over the Shenandoah lies Virginia proper beyond Loudon Heights. Since the war the town has remained in a sleepy, half-dilapidated condition. Its principal historic fame, of course, is connected with the desperate and daring raid of old John Brown, a feat which had no little influence in bringing on the late civil conflict. Without dwelling on its historic associations, let us briefly describe the situation. Climbing by the rude stone steps that lead up the brow of the mountain directly from the principal street of the town, we find our-

selves on Jefferson Rock, a remarkable stratified formation that rises abruptly from the town below. Here is the best attainable view of the mountains from their base, and of the meeting of the waters. Beyond the town loom Maryland Heights; to the left frowns Loudon, crowned with green, the sides seamed with fissures and ravines innumerable. In the gap between the two mountains, the Shenandoah, which flows down with many a curve skirting the Blue Ridge, and the Potomac, which comes down from the Alleghanies, unite. Geologists are yet uncertain in their minds whether this tremendous rent in the mountain-wall was made by some sudden convulsion or by the gradual eating away of the barrier that at one time confined a great interior lake. There is no grandeur in the scene. Life, brightness, and quiet beauty characterize it. The fair river lies spread out between wide inclosing banks, and catches the glitter of the sunlight and the huge shadows from the sentinel-peaks which guard its ample breast. The view from Maryland Heights, on the opposite side of the river, is one which no tourist ever misses. The climb up the almost perpendicular shoulder of the mountain is hard work, but on gaining the elevation the reward is ample in the splendid panorama opened to the vision. Before us lies stretched an almost interminable reach of valley and hill, beautiful with waving fields and wooded slopes. Mountains huge and stately melt away in the blue haze of the distance, and solitary peaks jut from the ranges as far as the eye can follow. Through the valley flows the Potomac, curving to the right and then deflecting to the left, disappearing and reappearing, and splashing the landscapes with bursts of silver. On the top of Maryland Heights we are at an elevation of thirteen hundred feet. The view is unobstructed, except where the Blue Ridge, throwing out spurs here and there, mountains linked to mountains in endless variety of height and shape, rises and divides valley from valley. The Blue Ridge, it must be understood, is characterized not only by its soft enveloping color, but by peculiarities of line and form. It is a series of ranges pocketed into one another. First one mountain takes up the elevation for ten or twelve miles, then some detached height will continue the broken chain, only to give place to a third, and so on to others. From Maryland Heights we look into seven counties and three States, and through the heart of the scene the Potomac courses in alternate sunlight and shade, adding beauty, life, and changeableness. The once desolate region, which the eye takes in from our coign of vantage, and of which General Sheridan once boasted that a crow flying over it would have to carry its rations in its beak, now smiles with the most perfect prosperity and loveliness. All around Harper's Ferry one may discover exquisite mountain prospects and stretches of picturesque beauty, but the outlook from Maryland Heights is probably the most satisfactory.

For another characteristic example of Virginia mountain-scenery let us visit the southwestern portion of the State. Reaching Lynchburg by the Atlantic, Mississippi, and Ohio Railroad, we find our point of departure for the celebrated Peaks of Otter from this quaint old Virginia town, one of the great centers of the tobacco-trade. A little more than a night's journey on the James River and Kanawha Canal, or, if we choose, a ride of twenty miles on horseback, brings us to the little town of

Liberty, the shire-town of Bedford County. From this place the twin peaks may be seen rising in haughty majesty against the blue of the sky, perched high upon the Blue Ridge chain. These towering sentinels of the lovely valley below them appear to be only a mile or two away, but it requires a tedious and fatiguing journey of several hours by wagon or horseback to reach the gap which separates them. Through this opening the capricious stream of the Otter, whence the peaks get their name, eddies and ripples and flows down for many a mile by humble farm-houses and through rich fields. The northern and highest peak, which rises 5,307 feet above the sea, is rarely visited. The other, which is shaped like a gigantic pyramid, is often ascended. The following description, from the journal of one who climbed to the summit of the peak, gives an admirable idea of the scene from the top:

"At last reaching the gap, more than three thousand feet above sea-level, we saw before us a pyramid of rough soil thickly sown with trees, and dotted with rude cabins in the clearings. On the right, the northern peak showed its wooded sides, where the bear still wanders undisturbed, and a little in front of us stood the primitive hotel, surrounded by flourishing orchards. The vine grows with surprising luxuriance along these mountains, the dry air and genial warmth giving every encouragement for the largest experimenting in vineyards.

"We now began gradually to master the ascent, and after half an hour of painful climbing over rudest roads, and a long scramble up an almost perpendicular hill-side, we came to a point in the forest where a high rock seemed to offer an impassable barrier, but around which led a path on a narrow ledge. We stumbled forward, and, dizzy with the effort, stood on the summit.

"Jagged and irregular masses of rock projected over a tremendous abyss, into which we hardly dared to look. A strong wind blew steadily across the height. We could not help fancying that some of the masses of stone, apparently so tightly suspended, might fall and crush us. Under the great dome of the translucent sky we stood trembling, shut off from the lower world, and poised on a narrow pinnacle, from which we might at any moment, by an unwary step, be hurled down. An old stone cabin, which had once served as the lodging for such adventurous persons as desired to see sunrise from the peak, but which had been partially destroyed during the war, was perched on one of the corners of the mighty crag; from it a slender board was laid to a sharp corner in the uppermost cliff, and up that we scrambled. Then, making our way on to the topmost stone, we gazed down on the Valley of Virginia. In front of us, looking over fertile Bedford County, it seemed a garden; from point to point gleamed the spires and roofs of villages; mountains of every imaginable shape rose on all sides; and the forests at the edges of the gaps in the Blue Ridge seemed delicatest fringes of purple. We could trace the massive and curving ranges of the Alleghanies, and the rudely-gullied sides of the nearest peaks. Their reddish soil, showing up strongly under the bright sun, produced a magical effect. Nowhere were the adjacent peaks, however, so near as to lessen the sublime illusion of seeming suspension in mid-air, produced by our climb to the highest rock



Peaks of Otter.

of the peak. The cabins along the roads below looked like black dots, the men at work in the fields like ants. From the rocky throne one seems to have the whole map of Virginia spread before him; and the back-bone of the Alleghanies appeared but as a toy which one might stride over or displace at will." Virginia is full of the most striking effects of landscape beauty, but beyond the typical examples already given we can not pass, but hasten on to take a rapid glance at other portions of the South.

It is safe to assert that there is no part of that vast extent of country which lies between the St. Lawrence and the Gulf of Mexico that is so slightly known and so little appreciated as the mountain-region of North Carolina.* While the White Mountains and the Adirondacks are yearly thronged with tourists, and the mountains of Virginia have been for half a century known to pleasure-seekers, these wild and beautiful highlands are to-day less visited, less written of, and less talked of, than the defiles of the Sierra Nevada and the peaks of the Rocky Mountains. Comparatively speaking, indeed, there are few persons who are even aware that much of the grandest scenery east of the Mississippi is to be found where the great Appalachian system reaches its loftiest altitude, in North Carolina.

With the majority, this ignorance will probably continue so long as palace-cars do not penetrate into the country, and hotels with all the luxuries of civilization are not to be found there. But to those who love Nature well enough to be able to endure some inconvenience in order to behold her in her most enchanting phases; to those who have any desire to enter a land where the manners, customs, and traditions of by-gone generations still linger; to those, above all, who can feel the loveliness of pastoral valleys, and the grandeur of cloud-girdled peaks, and who appreciate these things the more for a spice of difficulty and adventure, Western North Carolina offers a most attractive field, and is, after all (even from a nineteenth-century point of view), very easy of access.

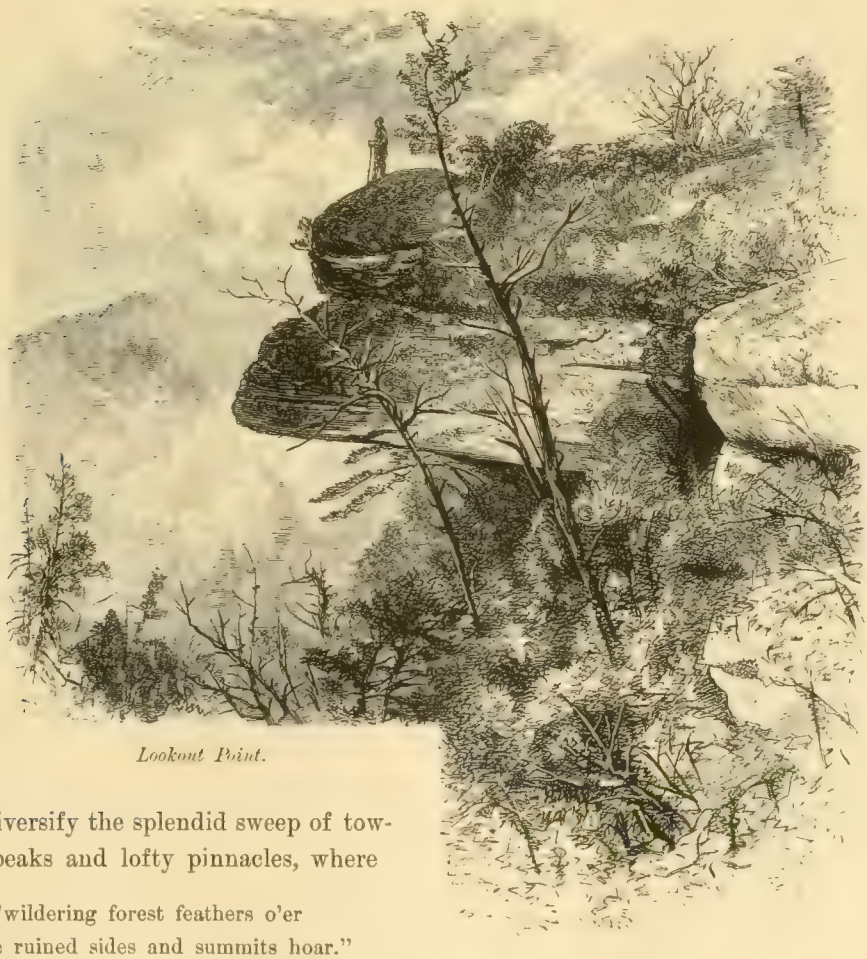
Geographically considered, no one can fail to perceive the incomparable advantages of the region. Touching Virginia with its upper corner, and Georgia with its lower, bounded by Tennessee and South Carolina, this table-land possesses a climate which can not be equaled in the Atlantic States. Its height—"for," says an excellent authority on the subject, "nineteen twentieths of the land is found between the elevations of eighteen hundred and thirty-five hundred feet above the ocean"—renders the atmosphere delightfully pure and bracing, while its southern latitude preserves it from harshness. It is at once invigorating and balmy, cool in summer, yet so mild in winter that it is very unusual for the ground to be covered with snow for a week at a time. Especially in the valleys, sheltered by the lofty mountain-chains, there is an equability of temperature so remarkable that it does not require the gift of prophecy to foresee that the country must in time become one of the greatest health-resorts on the eastern slope of the continent.

Let us take a glance at the map, to assist us in forming some idea of the extent of the region. We perceive that it is encircled by two great mountain-chains—the Blue Ridge forming its eastern boundary, the Great Smoky, which is the continuation of the Alleghanies in North Carolina, the western—within which lies an elevated land, two hundred and fifty miles in length, with an average breadth of fifty miles. It is also traversed by cross-chains, that run directly across the country, and from which spurs of greater or lesser height lead off in all directions. Of these transverse ranges

* The editor is indebted for the main portion of this description of the mountains of North Carolina to an article from the pen of Christian Reid, published in "Appleton's Journal."

there are four—the Black, the Balsam, the Cullowhee, and Nantahala. Between them lie regions of valleys, formed by the noble rivers and their minor tributaries, where a healthful atmosphere and picturesque surroundings are combined with a soil of singular fertility.

The Blue Ridge is the natural barrier dividing the waters falling into the Atlantic Ocean from those of the Mississippi Valley, and its bold and beautiful heights are better known than the grander steeps of the western chain. It abounds in scenery of the most romantic description. The streams that burst from the brows of the mountains leap down their sides in unnumbered flashing cascades, while cliffs and palisades of



Lookout Point.

rock diversify the splendid sweep of towering peaks and lofty pinnacles, where

> "A 'wildering forest feathers o'er
> The ruined sides and summits hoar."

Especially when approached from the eastern side, the beauty of this range is most perceptible, and along its entire course, from Virginia to Georgia, it is broken by gaps which in picturesque charm can not be surpassed. The most magnificent of these gate-ways is Hickory-Nut Gap, where for nine miles the traveler winds upward to the realm of the clouds along a narrow pass of inexpressible loveliness, hemmed

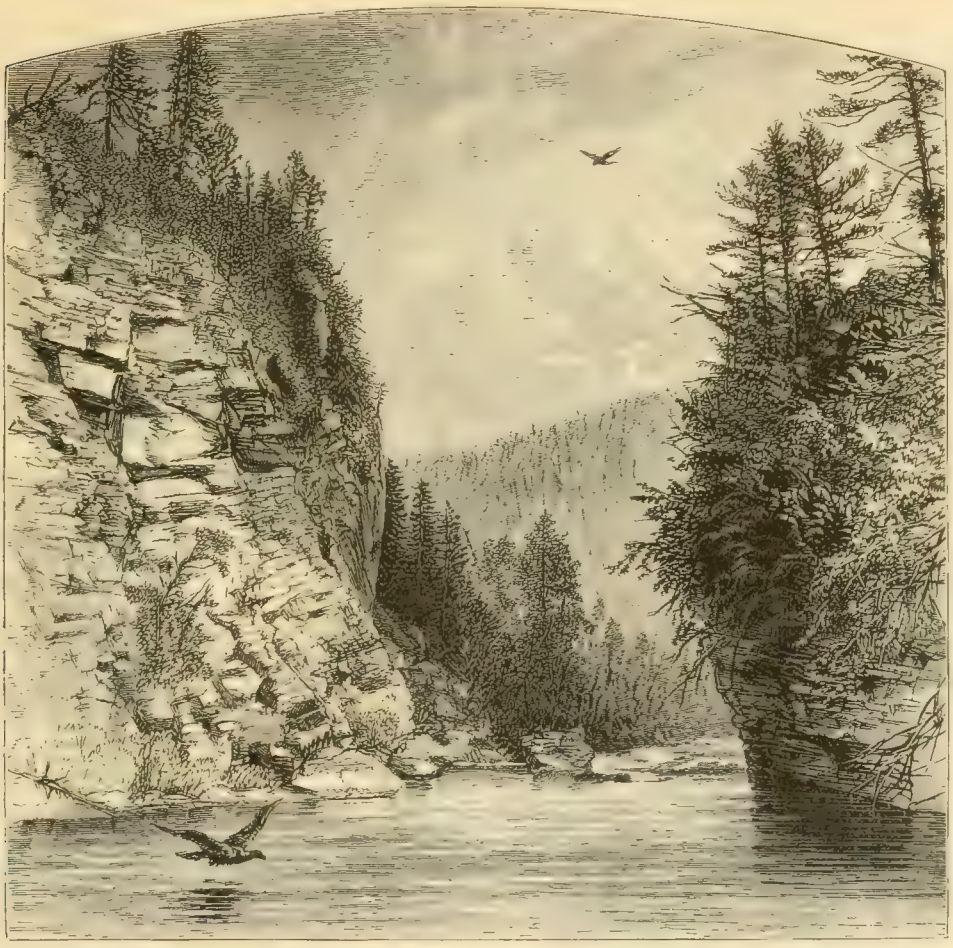
before, around, and behind, by stately heights, the road no more than a shelf along the mountain-side, and far below the Broad River, whirling and foaming over its countless rocks amid a wilderness of almost tropical foliage. Then, when the top of the gap is reached, what a view of the land which one has entered is spread unto "the fine, faint limit of the bounding day"! Mountains, mountains, and yet again mountains, fading into the enchanting softness of azure distance, with a paradise of happy valleys lying between! From crested hill to level meadow, a greenness which is like a benediction clothes all the nearer prospect, while afar the swelling heights wear tints so heavenly that no artist's pigments could reproduce them. A subtile sense of repose seems borne in every aspect of the scene. One feels that, if any spot of earth holds a charm for a weary body or an unquiet spirit, that spot is here.

On the western side of this "land of the sky" runs the chain of the Great Smoky —comprising the groups of the Iron, the Unaka, and the Roan Mountains—which, from its massiveness of form and general elevation, is the master-chain of the whole Alleghany range. Though its highest summits are a few feet lower than the peaks of the Black Mountain, it presents a continuous series of high peaks which nearly approach that altitude—its culminating point, Clingman's Dome, rising to the height of 6,660 feet. Though its magnitude is much greater than that of the Blue Ridge, this range is cut at various points by the mountain-rivers, which with resistless impetuosity tear their way through the heart of its superb heights in gorges of terrific grandeur. Scenery grand as any which tourists cross a continent to admire is buried in these remote fastnesses, utterly unknown save to the immediate inhabitants of the country, and a few adventurous spirits who have penetrated thither.

The most famous of the transverse ranges is that of the Black Mountain, the dominating peak of which is now well known to be the loftiest of the Atlantic summits. One is surprised to consider how long the exact height of these mountains remained undetermined, and Mount Washington, in New Hampshire, was esteemed the highest point east of the Rocky Mountains, while, in truth, not fewer than thirty peaks in North Carolina surpass it in altitude. The Black Mountain is a group of lofty heights, which attain their greatest elevation near the Blue Ridge. With its two great branches, it is more than twenty miles long, and its rugged sides are covered with a wilderness of almost inaccessible forest. Above a certain elevation no trees are found, save the balsam-fir, from the dark color of which the mountain obtains its name. It is not likely that any one who has ever crossed the Blue Ridge by Swannanoa Gap will forget the first impression which the outlines of this range make on the mind. Sublimity and repose seem embodied in the sweeping lines of its massive shoulders, and its dark-blue peaks stand forth in relief, if the atmosphere chances to be clear, or wear a crown of clouds if it is at all hazy. During the season, parties of excursionists constantly visit it from Asheville, ascending the highest peak, and returning within three days; but to make the acquaintance of the mountain in a satisfactory manner a longer time is required.

Nevertheless, a great deal can be seen in even one visit to the summit of Mount

Mitchell; and, although nothing is more uncertain than the weather of the Black, if the visitor is fortunate enough to find a clear day, he will obtain a view which is almost boundless in extent. All Western Carolina lies spread below him, together with portions of Virginia, Tennessee, Georgia, and South Carolina. He can trace across the breadth of the Old Dominion the long, undulating line of the Blue Ridge, which, entering North Carolina, passes under the Black, and thence runs southerly until it



Linville River.

reaches South Carolina, when it turns to the west, and, making a curve, joins the Smoky near the northeast corner of Georgia. Overlooking this range, from his greater elevation, he sees every height in that part of North Carolina which lies east of it. Far away on the border of the two Carolinas stands a misty mound, which is King's Mountain, of Revolutionary fame; and from this point the eye sweeps over an illimitable expanse, returning to where the spurs of the Blue Ridge cover the counties of Rutherford, Burke, and McDowell, with a net-work of hills.

Chief among these is the range of the Linville Mountains, through which the Linville River forces its way in a gorge of striking beauty. This gorge is fifteen miles in length, and the heights which overshadow it are in many places not less than two thousand feet high. The river plunges into its dark depths in a beautiful fall, and



Linville Pinnacle.

then rushes forward over a bed of rock. Cliffs worn by the ceaseless action of the water into the most fantastic shapes lean over it, detached masses of granite strew its channel, and the tumult of its fretted water only ceases when it falls now and then into crystal pools of placid gentleness.

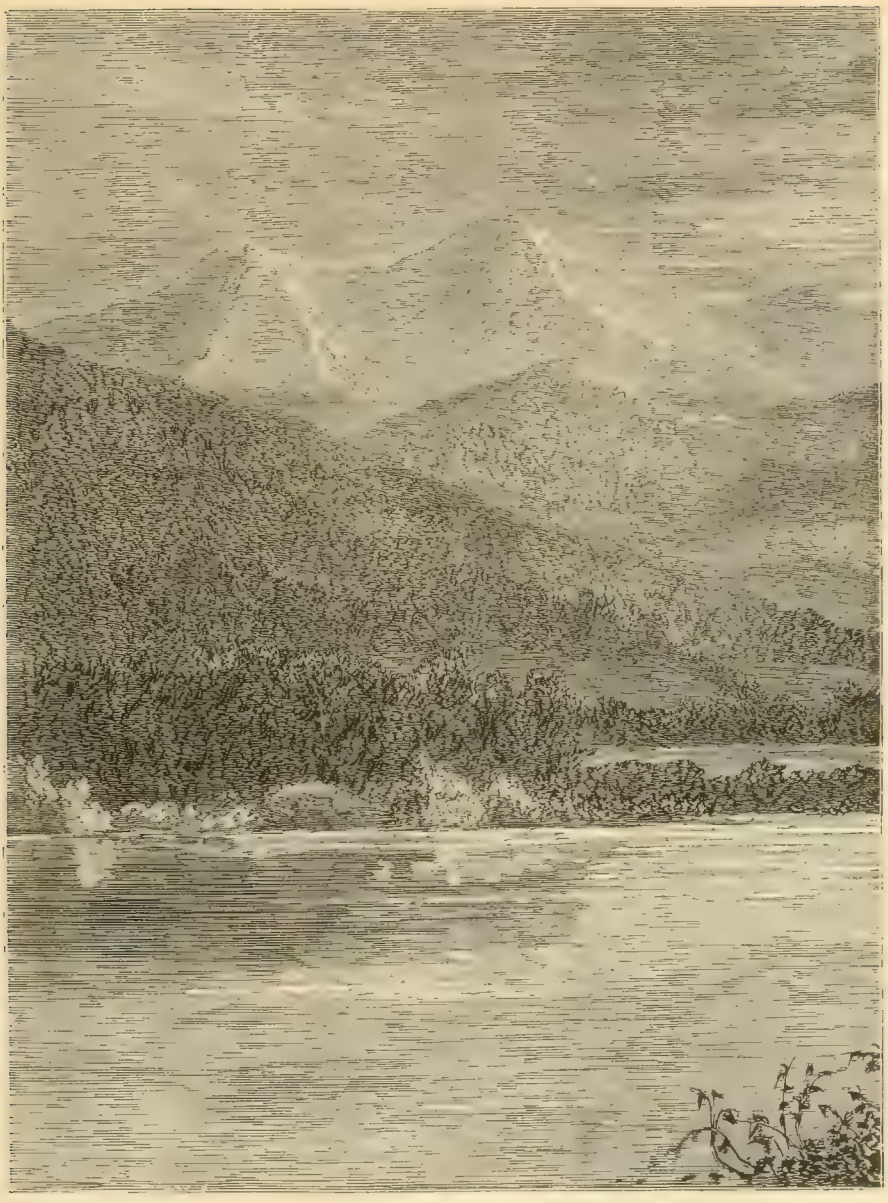
Among the mountains of the Linville range, that peak known as Linville Pinnacle, in Catawba County, is one of the most interesting to the tourist. This mountain-top is easily attained on horseback, and, on reaching it, you find it surmounted by a cluster of immense rocks or angular bowlders, upon which you may recline at your ease, and look down, or far away, upon a series of rare and superb scenes. One of these, and the one here depicted, consists of a brotherhood of mountains which are particularly ragged and fantastic in their formation—now shooting forward, as if to look down into a narrow valley or ravine, and then again looming to the sky, as if to pierce it with their pointed summits. On another side of the Pinnacle is a precipice, which seems to descend to the very bowels of the earth; in another direction still, you have a full view of Short-off Mountain, only about a mile distant, which is a perpendicular precipice, several thousand feet high, and the abrupt termination of a long range of mountains; and, turning to the west, you look across a valley, or champaign country, well-nigh a hundred miles wide, which is bounded by a range of mountains that seems to sweep across the world as if on a triumphal march. But the scenery of this particular region of North Carolina is as varied as it is fresh and charming; and such features as the Hawk's Bill, the Table, the Roan, and Ginger-Cake Mountains, as well as the Linville Falls, are quite enough to give it a wide reputation. The mountain last mentioned received its outlandish name from a hermit named Watson, who once lived at the foot of it, in a log-cabin, and entirely alone. His history was a mystery to every one but himself, and, though remarkably eccentric, he was noted for his amiability. He had given up the world on account of a disappointment in love, and the utter contempt which he ever afterward manifested for the gentler sex was a leading trait of his character. Whenever any ladies chanced to visit him, he invariably treated them politely, but would never speak to them; he even went so far, in expressing his dislike, as to consume for fire-wood, after the ladies were gone, the top-rail of his yard-fence, over which they had been compelled to pass on their way into his cabin. That old Watson "fared sumptuously every day" could not be denied; but, whence came the money that supported him, none could divine. He seldom molested the wild animals of the mountain where he lived, and his chief employment was the raising of peacocks and the making of garments for his own use, which were all elegantly trimmed off with the feathers of his favorite bird. The feathery suit in which he kept himself arrayed he designated as his *culgee*, the meaning of which word could never be ascertained; and, long after the deluded being had passed away from among the living, he was spoken off as Culgee Watson, and is so remembered to this day.

The traveler who approaches the Linville Pinnacle from the south can not fail to be impressed by the views he will obtain of the Roan and Grandfather Mountains. The first of these derives its name from the fact that, when covered with snow, it presents a roan color. It lies in the States of North Carolina and Tennessee, and has three peaks, which are all destitute of trees. The highest of these is covered with a tall grass, which resembles that of the Western prairies, and where the cattle and

horses of the surrounding farmers, in large numbers, congregate throughout the vernal seasons. The ascent to the top of this peak is gradual on all sides but one; but, on the north, it is quite abrupt, and, to one standing on the brow of the great cliff, the scene is exceedingly grand and impressive. In accounting for the baldness of the Roan Mountain, the Catawba Indians relate the following tradition: "There was a time when all the nations of the earth were at war with the Catawbas, and had proclaimed their determination to conquer and possess their country. On hearing this, the Catawbas became enraged, and challenged all their enemies to a fight on the summit of the Roan. The challenge was accepted, and no less than three famous battles were fought—the streams of the land ran red with blood; a number of tribes were utterly destroyed; but the Catawbas were victorious. And then it was that the Great Spirit caused the forests to wither from the three peaks where the battles were fought, and therefore it is that the flowers which grow upon this mountain are chiefly of a crimson hue, for they are nourished by the blood of the slain." Of the Grandfather Mountain it may be said that it is altogether the wildest and most fantastic mountain of the whole Alleghany range. It is reputed to be five thousand six hundred feet high, and famous for its black bears. Its principal human inhabitants, for many years, were a man named Jim Riddle and his loving spouse, whose cabin was located near the summit. The stories related of this man would fill a volume. He was once accidentally penned up in one of his bear-traps, while baiting, and, having only a small hatchet in his belt, he was occupied one day and one night in hewing his way out; but this narrow escape from death caused him to abandon his habit of swearing and to become a religious man. To the comprehension of this mountaineer, the Grandfather was the highest mountain in the world, and his reason for believing this was, that, as you stood on the very top, "all the other mountains upon earth lay rolling from it, even to the sky." It is said that Riddle was a remarkable marksman; and one of his pastimes, in the winter, was to shoot at snow-balls, in which elevated luxury his wife, Betsey, was wont to participate with enthusiasm. But, in process of time, he abandoned his eyrie to the storms, and became a preacher in the low country.

Returning to the region west of the Blue Ridge, we find the Black diverging into two chains, one of which stretches northward, with a series of cone-like peaks rising along its dark crest, and ends in a majestic pyramid, while the northwestern ridge runs out toward the Smoky. Another branch is the range of Craggy, which trends southward, with its lofty peaks—the Bull's Head, the Pinnacle, and the Dome—in bold relief. This chain is noted for the pastoral character of its scenery, and the myriads of gorgeous flowers which cover its slopes. Here the rhododendron—especially its rare, crimson variety—grows to an immense size, and makes the whole range, in the month of June, a marvel of floral loveliness.

Northward of the Black Mountain stand two famous heights, which Professor Guyot calls "the two great pillars on both sides of the North Gate to the high mountain-region of North Carolina." These are the Grandfather Mountain, in the Blue Ridge, and the Roan Mountain, in the Smoky. Both of these command a wide



Mount Pisgah.

view, but the Roan is specially remarkable for the extent of territory which it overlooks. The traveler on its summit is always told that his gaze passes over seven States—to wit, North Carolina, Virginia, Tennessee, Kentucky, Alabama, Georgia, and South Carolina—but, since States are not laid off in different colors, like the squares of a chess-board, he may be pardoned for perceiving no great difference in the imaginary lines which divide the vast expanse. The mountain itself and the immediate view are better worth attention. On one side it commands the apparently infinite

diversity of the North Carolina highlands, on the other the rich valley of East Tennessee and the blue chain of the Cumberland Mountains, stretching into Kentucky. Like many of the Smoky and Balsam heights, its summit is bare of timber, and forms a level, verdant prairie, ending in an abrupt precipice on the Tennessee side.

Next to the Black, in the order of transverse chains, comes the Balsam, which, in point of length and general magnitude, is chief of the cross-ranges. It is fifty miles long, and its peaks average six thousand feet; while, like the Blue Ridge, it divides all waters, and is pierced by none. From its southern extremity two great spurs run out in a northerly direction. One terminates in the Cold Mountain, which is more than six thousand feet high; the other rises into the beautiful peak of Pisgah, one of the most noted landmarks of the country. Among the mountains which, seen from Asheville, lie in blue waves against the southern horizon, this commanding pyramid stands forth most prominently, and from its symmetrical outline, not less than its eminence, attracts the eye at once. Nor does this attraction end with the first view. Its harmonious lines are a constant source of delight, and the robes of soft color which it wears are constantly changing and ever charming. To see it, as it often appears, a glorified crest of violet, against a sky divinely flushed with sunset rose and gold, is one of those pleasures which custom can not stale.

It follows, naturally, with all who have the true spirit of mountaineering, that they desire to stand on that uplifted eminence. Those who carry this desire into effect are gratified by a view less extensive than that of the Black or the Balsam, but hardly less worth beholding. The summit of Mount Pisgah forms the corner of the counties of Buncombe, Henderson, Transylvania, and Haywood, and over the outspread face of each—broken by innumerable hill-waves and smiling valleys—the gaze passes to where the tall peaks send their greeting from the borders of South Carolina and Tennessee. Near by rise the Cold Mountain and Shining Rock, with the wooded heights of Haywood rolling downward to the fertile valley of the Pigeon—a beautiful stream, which finally cuts its way through the Smoky and joins the French Broad in Tennessee.

The course of the latter river is plainly to be marked by its width of cultivated lowlands, as it passes through Transylvania and Henderson, to where Asheville lies, surrounded by an amphitheatre of hills. Among these hills the river enters, and pours its current along a constantly-deepening gorge, narrow as a Western cañon, and inexpressibly grand, until it also cuts a passage through the Smoky, and reaches Tennessee. For thirty-six miles its waters well deserve their musical Cherokee name—Tahkeeostee, "the Racing River"—and the splendor of their ceaseless tumult fascinates both eye and ear.

There is a greater attraction in the unknown than in the known, however; and the traveler who has followed the French Broad to where it surges around Mountain Island and sweeps beneath Paint Rock; who has stood on the hills of Asheville, and admired the gentle loveliness of the valleys which encompass it; who has tracked the Swannanoa to its birthplace in the ice-cold springs of the Black Mountain, and climbed

to the summit of that Appalachian patriarch—it is natural that such a traveler, turning his back on these places made familiar by exploration, should look with longing at the dark chain of the Balsam, forming so lofty a barrier between himself and the still wilder, still more beautiful region that lies farther westward.



The French Broad.

If he possesses courage and resolution, if he does not shrink from trifling hardships, and if he can endure cheerfully a few inconveniences, let him resolve to scale those heights, and gaze at least upon all that lies beyond. There is very little diffi-

culty in executing such a resolution, and nobody who can appreciate the sublime in natural scenery, or who likes the zest of adventure, will ever regret having executed it.

Should he be able to do so, let him descend Mount Pisgah on the Transylvania side, for in all this Eden of the sky there is no spot which wears the crown of sylvan beauty so peerlessly as that fair county. Other counties may boast mountains as high, and atmosphere as pure, but no other has in its aspect such a mingling of the pastoral and the grand, no other possesses such graceful alternations of landscape, which, with the strong effect of contrast, charm the beholder at once. It is with a thrill of positive rapture that one sees for the first time the valley of the French Broad—serene with golden plenty, and held in the soft embrace of encircling heights. In the midst of this valley is situated the pleasant village of Brevard, where the traveler will do well to establish his headquarters. He will find most comfortable lodging and most admirable fare, together with that cordial hospitality which is ever ready to oblige the wayfarer and stranger. Should he possess that mountaineering spirit to which allusion has been made, he need not fear that time will hang heavily on his hands. There are speckled trout in the streams; there are deer in the coverts of the forests; and there are countless places of picturesque interest, many of which are within the easy range of a day's excursion.

This queen of mountain-valleys lies twenty-two hundred feet above the sea, and has at this point an average width of two miles. The three forks of the French Broad—two of which rise in the Balsam, and one in the Blue Ridge—meet at its upper end, and the united stream flows, with many a winding curve, down the emerald plain. Framing the broad fields and grassy meadows are forest-clad heights, and yet beyond rises the blue majesty of the grandest peaks in Western Carolina.

To fully appreciate the charm which fills every detail of this picture, it should be viewed from the summit of a cliff on its eastern side known as Dunn's Rock. The elevation of the hill, which rises abruptly in this castellated crag, is probably not more than five hundred feet above the level of the river; but the river is one which lingers in the memory in colors that no lapse of time can dim. While it is easy to find more extended views, it would be impossible to find one of greater fairness. The pastoral valley lies spread in smiling beauty for fifteen miles, with every curve of the river plainly to be traced throughout that length, the shining water fully revealed in many a mile of undulating stretch. Belts of shadowy woodlands stretch across the cultivated expanse, roads like yellow ribbons wind here and there, dwellings gleam out, half hidden in trees, and Brevard nestles at the feet of the bold elevations which rise behind it.

It is difficult to say whether the eye lingers with greater pleasure on the idyllic softness of this scene, or on the magical distance where peak rises beyond peak until the most remote melt into blue infinity. Farthest toward the west stands the sharp crest of Chimney-Top and the massive outlines of Great Hogback—a noble mountain, deserving a better name. From these well-known summits the waving line sweeps

onward in azure beauty until it culminates in the peaks of the Balsam. The loftiest of these stand in full view, together with the whole length of the range of Pisgah. Symmetrical as ever, this familiar pyramid appears, among a multitude of lesser heights, while through the soft-hued gap, where the Arcadian valley winds around Fodder-Stock Mountain, one discovers faint and far the mighty dome of the Black.

Besides Dunn's Rock, there are many eminences around Brevard which repay a hundred-fold the exertion of ascending them; while down the glens of the hills impetuous streams come rushing in Undine-like cascades. Such are the Falls of Conestee, of Looking-Glass, and Glen Cannon. Into these recesses the lances of sun-light are scarcely able to pierce to find the laughing water, so luxuriant is the forest-growth which forms depths of twilight obscurity, where ferns, and mosses, and numberless bright, sweet flowers flourish.

From Brevard the way to the Balsam is plain and short. Following the north fork of the French Broad into what is known as the



Cliffs on the French Broad.

Gloucester Settlement, the traveler will find himself at the foot of this range. Here he can readily secure a guide, and make the ascent of the peaks, which attain their highest elevation at this point. Professor Guyot has recorded his opinion that, "considering these great features of physical structure" (the Balsam heights), "and the considerable elevation of the valleys which form the base of these high chains, we may say that this vast cluster of highlands between the French Broad and the Tuckasegee Rivers is the culminating region of the great Appalachian system."

It is at least certain that their appearance impresses one with a deeper sense of grandeur and sublimity than even the Black Mountain. Immense ridges rise on all sides; lofty peaks lift their heads into the dazzling region of the upper air; escarpments of rugged rock contrast the verdure of the forest which clothes all other points; while trackless gorges and deep chasms, where the roar of unseen cataracts alone breaks the silence of solitude, are the characteristic features of the region. Leaving the domain of Gloucester, a traveler of faint heart and wavering courage may be struck with dismay at the wildness of the scenes into which he is led. The path is a trail only visible to the eyes of a mountaineer, which plunges down precipitous hill-sides, winds along dizzy verges, where a single false step would send horse and rider crashing into the abyss below, and mounts ascents so steep that the saddles threaten to slip back over the straining animals, and a cautious rider will look well to his girths. Knob after knob is climbed, and yet the dominating heights—as one catches glimpses of them now and then—seem far away as ever. Nevertheless, it is evident that one's labor is not in vain. The air grows more rarefied, the horizon expands, the world unrolls like an azure scroll, and over it spreads the marvelous haze of distance.

"It was the good fortune of the writer," says a lady tourist, who has written much of this region, "to be one of a party who made this ascent during the past summer, and it is little to say that all difficulties and perils were forgotten when we stood at last on the summit of the highest peaks, and felt that we were in the center of the great system of diverging heights spread around us, far as the gaze could reach, to the uttermost bounds of land and sky. There is an intense exhilaration of mind and body consequent upon attaining such an elevation, and we were exceedingly fortunate in having two days of perfect weather—days of the radiant softness which only September gives.

"The spot where we found ourselves was a treeless tract of several hundred acres on top of the Balsam range. The Cherokees believe that these open spaces are the foot-prints of the devil, made as he stepped from mountain to mountain, and this largest prairie they regard with peculiar awe as his favorite sleeping-place—probably selected because he likes now and then a complete change of climate. On maps of the State this point is marked 'The Devil's Old Field,' and, apart from the association with his satanic majesty, the title is not altogether inapposite. So peculiar is the appearance of these openings, where grass and bushes of all kinds flourish luxuriantly, that one is almost forced to believe that at some remote period man had his

habitation here. Like the Black, the Balsam takes its name from the fir which grows upon it, but, unlike the Black, these trees, instead of covering the whole upper part of the mountain, are found only on the north side. On the southern slopes the deciduous forest grows to the summit, and there—as if a line of exact division had been drawn—the latter growth ends, and the somber realm of the balsam begins.

"Having been bold enough to pitch our camp in the midst of the Devil's Old Field, we were probably punished by finding ourselves next morning wrapped in mist



Hawk's Bill Mountain.

at the time that we should have been witnessing the sun rise beyond a thousand peaks. By eight o'clock, however, the clouds lifted, the mist dissolved, and, seated on the rocky crest of a high knob, with air so lucid and fresh that it seemed rather of heaven than earth fanning our brows, we were truly 'girdled with the gleaming world.' On one side spread the scenes over which we had journeyed—every height south of the Black clearly visible, and distinctly to be identified—while on the other the country on which we had come to gaze stretched westward, until its great ridges,

like giant billows, blended their sapphire outlines with the sky. Overlooking this immense territory, one felt overwhelmed by its magnitude, and the imagination vainly strove to picture the innumerable scenes of loveliness that lay below, among what seemed a very chaos of peaks, gorges, cliffs, and vales.

"That the face of this part of the country should appear especially covered with mountains is not strange, when one considers that five great ranges traverse and surround it. Looking west from the Balsam, we saw on our left the Blue Ridge, on our right the Smoky, and in front the Cullowhee, with the Nantahala lying cloud-like in the far distance. Countless intervening chains spread over the vast scene, with graceful lines blending, and dominant points ascending, forming a whole of wondrous harmony. Near at hand the heights of the Balsam, clad in a rich plumage of forest, surrounded us in serried ranks—a succession of magnificent peaks, infinitely diversified in shape, and nearly approaching the same standard of elevation. What exquisite veils of color they drew around them, as they receded, wrapping their mighty forms in tenderest purple and blue! The infinite majesty of the great expanse, the unutterable repose which seemed to wrap the towering summits in their eternal calm, filled the mind with delight and awe. No words seemed fitting save the exultant ones of the canticle: 'O ye mountains and hills, bless ye the Lord, praise him and magnify him for ever!'

"On the summit of the height where we sat, the counties of Haywood, Jackson, and Transylvania meet. Of these Jackson is the most westwardly, and is rich in scenery of the noblest description, being bounded by the Balsam, the Blue Ridge, the Cullowhee, and Great Smoky—the innumerable spurs of which cover it in all directions. Yet here, as elsewhere, the pastoral joins hands with the rugged. These mountains are nearly all fine 'ranges,' where thousands of cattle are annually reared with little trouble and less expense to their owners; and through the midst of the country the wildly beautiful Tuckasegee flows. Rising in the Blue Ridge, this river forces its way through the Cullowhee Mountains in a cataract and gorge of overwhelming grandeur, and, augmented at every step by innumerable mountain-torrents, thunders, foams, and dashes over its rocky bed, until it is united to the Tennessee—which comes with headlong haste down from the Balsam—when, losing its name in the latter, it cuts a cañon of great majesty through the Smoky, and pours its current into the valley of East Tennessee. In Jackson, on the southern side of the Blue Ridge, the head-waters of the Savannah River also rise. The Chatooga, which washes the base of the great Whiteside Mountain, flows into Georgia, and, with the Tallulah, forms the Tugaloo, which is the main head of the Savannah."

At the southern end of this county is Cashier's Valley, famous for its salubrious climate, and so accessible from South Carolina that many gentlemen from the low-country have erected summer residences there. It is more of a table-land than a valley, lying on the side of the Blue Ridge, so near the summit that its elevation above the sea can not be less than thirty-five hundred feet, and hemmed in on all sides by splendid peaks, among which Chimney-Top stands forth conspicuously, while

in full view, only four miles southwest, Whiteside lifts its shining crest, as a beacon and landmark. At this point the Cullowhee Mountains join the Blue Ridge. There are few parts of the country less visited, and there is none that repays exploration better. Whiteside, alone, is worth traveling any distance to see, for it is undoubtedly the grandest rampart of this picturesque land. Standing more than five thousand feet above the ocean, its southeastern face is an immense precipice of white rock—the constituent parts of which are said to be quartz, feldspar, and gneiss—which, rising to the height of eighteen hundred feet, is fully two miles long, and curved so as to form part of the arc of a circle. A more imposing countenance never mountain wore, and it is impossible to say whether its sublimity strikes one most from the base or from the summit.

To reach the foot of the stupendous precipice, it is necessary to climb for probably a mile through a bewildering world of green woods and massive rocks. When one has fairly entered these vast forests, their tangled depths of sylvan shade and sheen form a region of absolute enchantment. On every side are graceful forms of trees and clusters of foliage, draping vines and delicate tendrils, velvet mosses and ferns, in plumy profusion. Starry flowers lift their sweet chalices, the massive trunks of trees "fit for the mast of some tall admiral" lie buried in verdure. Under arches of cloistral greenness the crystal streams come glancing, like—

> ". . . a naiad's silvery feet
> In quick and coy retreat,"

and the music of their swiftly flowing water alone breaks the woodland stillness. Through such scenes one ascends to the huge cliffs of Whiteside, and pauses beneath them with a sense of amazement and awe. The first precipice rises six or seven hundred feet in sparkling whiteness, with an outward inclination of probably sixty feet. At one or two points it is practicable for an expert climber to scale this cliff, and stand on the second and even grander ledge. From this shelf—where a narrow belt of trees runs, presenting from a distance the appearance of a verdant zone across the mountain's side—the higher precipice rises in majestic ascent for more than a thousand feet. It is not altogether smooth of surface—as one fancies when approaching it—but is worn by the great forces of Nature, concerning which we can only vaguely conjecture, into numerous escarpments of wild and inexpressibly picturesque form. Cave-like recesses abound, and the largest of these is known as "the Devil's Supreme Court-House." It is an enormous cavity in the face of the precipice, where, according to Cherokee tradition, the prince of the powers of darkness will on the day of doom erect his throne, and try all spirits who fall under his jurisdiction. The approach to it is along a ledge so narrow and dangerous that few people are sufficiently cool of head and steady of nerve to dare its passage. Pending the session of the court, the cave is a favorite haunt of the bears which still abound in the neighborhood. Hunters sometimes go thither to seek them; but there is a story told of one hunter which might dissuade others from undertaking such an expedition.

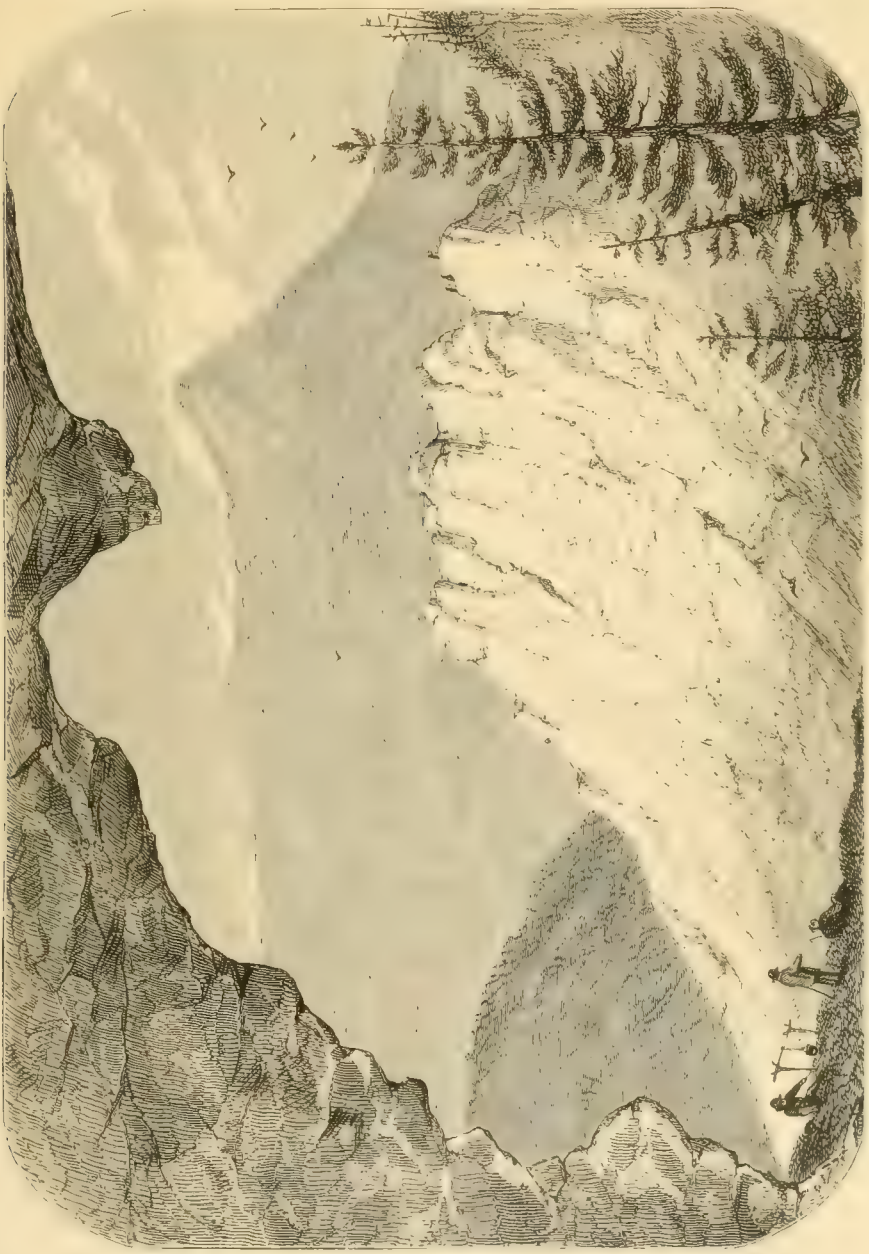
This man, hoping to find a bear in the cave, was proceeding cautiously along the ledge which led to it, when he suddenly, to his dismay, found the bear sooner than he wanted him. Bruin had left the cave, and was leisurely taking *his* way along the narrow shelf, when he, too, was unpleasantly surprised by the appearance of a man in his path. Both came to a dead halt. To the hunter it was a moment of trying anxiety. To turn was impossible, even if it would not have been ill-advised to do so. He had his gun, but dared not fire, for fear of only wounding the animal, and thereby rendering it desperate. Fortunately, it was one of the occasions when inaction proved the best thing possible. After they had steadily eyed each other for some time, the bear decided to retrace his steps. He made an attempt to turn, but the effort sealed his fate. His weight overbalanced him, and down the precipice he went, a crashing mass, in which there was not a whole bone when the hunter descended to it.

But, if the cliffs are grand, what can be said of the view when the bold brow of the mountain is gained? It is readily ascended from the rear, and, when one advances to the verge of its splendid crest, the beauty of the prospect thrills one like noble music. The smiling valleys and green depths of forest far below, the azure fairness of distant heights, the misty sweep of ocean-like plains, the fleecy clouds which drift across the sky—all combine to awaken emotions of delight. "From the orient to the drooping west," mountains on mountains rise, cloud-girt, blue-robed, soft as the hills of paradise. Southward the plains of South Carolina fade away into glimmering haze, while west of the Cullowhee lies the domain of Macon and Cherokee —a territory abounding in lofty ranges and fruitful valleys, rushing streams and immense forests—extending to where the cloud-capped peaks of Georgia are defined against the distant horizon. Turn where one will, scenes of loveliness meet the sight, and the delicious purity of the atmosphere makes one dream of a sanitarium which may be some day established here. It is impossible, however, to regret that such a day has not yet come, that multitudes of tourists have not yet invaded these fair solitudes, and—engraved their names upon the shining rocks!

One of the most interesting mountains of the Great Smoky range is known as Smoky Mountain, and it has its base in Tennessee as well as in North Carolina. The chief attraction is a singular cliff known as Alum Cave, and the best approach to it is from the Tennessee side. You leave your horses on the top of the mountain and then journey for six miles up and down, over everything in the way of rocks and ruined vegetation which Nature could devise, until you come to a mountain-side about two miles from the starting-point in a direct line.

Roaring along at the base of this mountain is a small stream, from which you have to climb a precipice in a zigzag way, which is at least two thousand feet high, when you find yourself on a level spot of pulverized stone, with a rocky roof extending over your head a distance of perhaps sixty feet. The length of this hollow in the mountain, or "cave," as it is called, is nearly four hundred feet, and, from the brow of the beetling precipice to the level below, the distance is about one hundred and

fifty feet. The top of the cliff is covered with a variety of rare and curious plants, and directly over its center trickles a little stream, which forms a pool, like a fountain



Alum Cave, Smoky Mountain.

in front of a spacious piazza. The ingredients of the rock composing this cliff are alum, epsom salts, saltpeter, magnesia, and copperas, and the water which oozes therefrom is distinguished for its strong medicinal qualities. This strange and almost in-

accessible, but unquestionably very valuable cave, belongs to an organized company, and, before the late war, had been worked with considerable profit, on account of its alum. The scenery upon which this cave looks down is also decidedly novel and interesting. From one point of view the mountains descend abruptly from either side, into a kind of amphitheatre, where the one on the right terminates in a very narrow and ragged ridge, which is without vegetation, while far beyond, directly in front of the cave, rises a lofty and pointed mountain backed by some three or four peaks of inferior magnitude. The ridge alluded to is very high, but yet the cave looks down upon it, and it is so fantastic in its appearance that, from different points of view, may be discovered natural holes, or windows, opening through the entire wall, while from other points of view the great rocky mass resembles a ruined castle, a decayed battlement, or the shattered tower of a huge cathedral. To gaze upon this prospect at the sunset hour, when the mountains are tinged with a rosy hue, and the great hollow, or basin, before you is filled with a purple atmosphere, and the rocky ledge is basking in the sunlight like a huge monster on the bosom of a placid lake, affords one of the most curious and impressive scenes imaginable. But the locality, under any of its phases, will amply repay the lover of fine scenery for a long pilgrimage.

By crossing northward from the Smoky Mountain range—that bold projection of territory with which Tennessee divides North Carolina from Virginia—we reach the noble mountains known as the Cumberland range, this being in reality a spur of the main Alleghany system which stretches down through Virginia and North Carolina. Here the eye meets almost every variety of picturesque expression. Here and there are broad table-lands on which cities might be built, terminating abruptly in escarpments and vertical precipices, looking like the fronts of stupendous fortresses built by the hands of giants. There are rocks full of grand aspects; caves that might be the hiding-places of the winds; melodious water-falls; glens and chasms; and forests so dense that only the most experienced hunter could ever thread his way in safety. The changeless masonry of Nature is piled up in every conceivable shape. The mountains of the Cumberland region take the form of ridges parallel to one another. In these there are a number of great fissures, or gate-ways, through which the traveler must pass in crossing the range.

The most celebrated of these openings is Cumberland Gap, in East Tennessee, near the Kentucky border, about one hundred and fifty miles southeast from Lexington. This is the only practicable passage-way for a distance of about eighty miles for the travel of man or beast. It is some five hundred feet in depth, about six miles in length, and so narrow in many places that there is scarcely room for the roadway. Mountains rise on either side to a height of twelve hundred feet, and, when the observer has climbed their frowning steeps, he beholds one of the most beautiful views in America. Southward are the lovely valleys of Tennessee, looking in the distance like an undulating plain, on which human handiwork has written its significant marks. Gazing to the north, a series of rolling mountains, looking like huge billows, rise as barriers to hide the smiling fields of Kentucky.

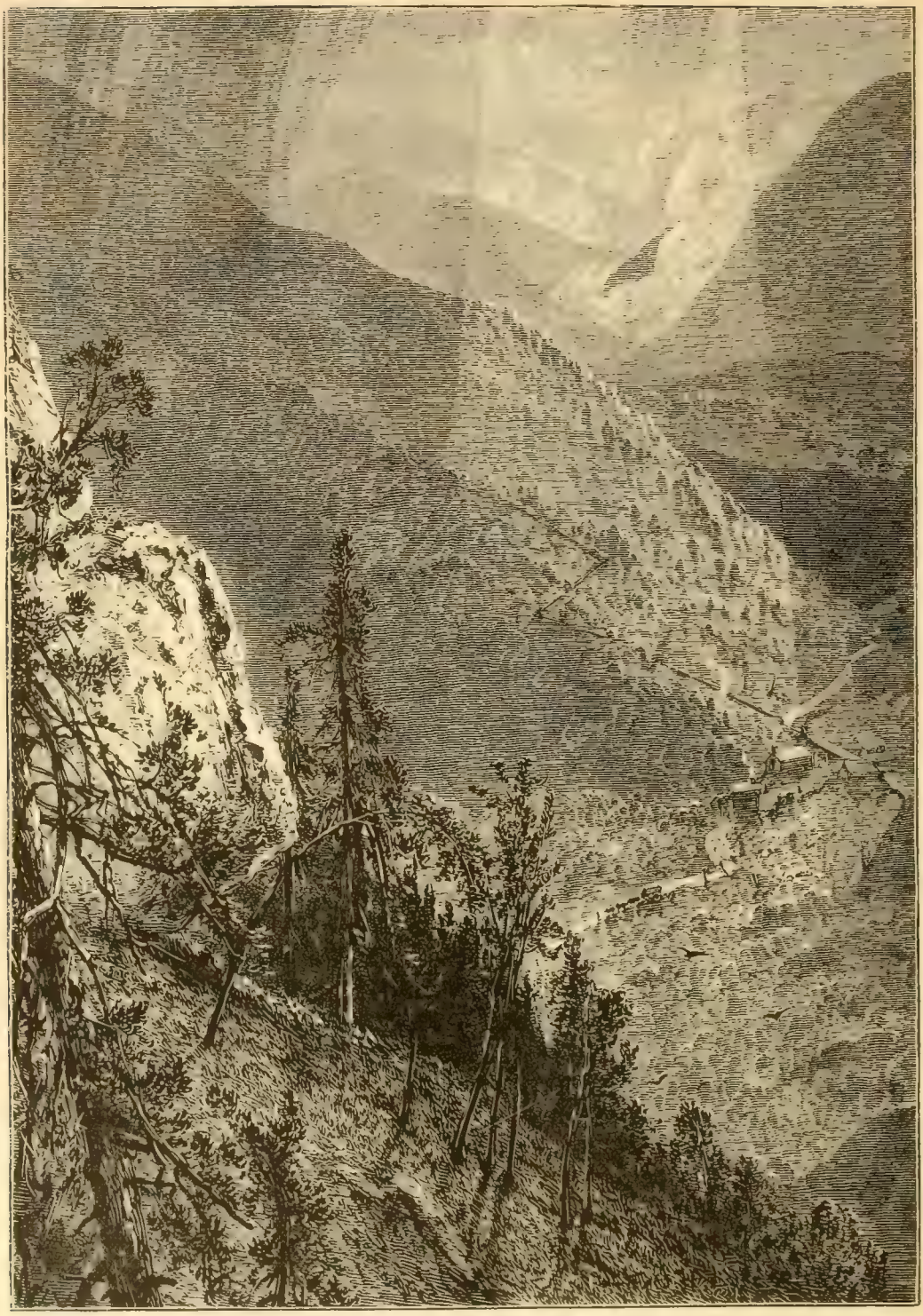
During the late civil war Cumberland Gap resounded to the tramp of armies surging back and forth. For a time it was held by the Confederates as a fortified position, and cannon bristled from the adjoining heights; for on the possession of that secluded mountain recess depended the safety of the railway connections between Richmond and the southwestern portions of the revolted States.

The road through the Gap curves like a great ribbon, to take every advantage of a precarious track, and it is indeed but the enlarged war-trail once traveled by the Cherokees and other savages in making their incursions on the white settlements. Here Boone and the early pioneers passed back and forth, and nearly every mile of the whole region is associated with a bloody ambuscade, a legend, or a tradition. So lonely and wild is it even to-day that one would not feel it incongruous to hear the shrill war-whoop of the red-skin, or the crack of the rifle in answer to the challenge.

There are but few residents in the Gap. A rude grocery here and there marks the primitive commerce of the region, the trader exchanging whisky, clothing, etc., for the products of the region, which thus find their way to market. The mountaineers are a sturdy, warm-hearted race, unlearned in the courtesies of life, but full of generous hospitality. During the civil war there was battle to the knife between families in this section, as there were a great many Unionists among the East Tennessee mountaineers, and some of the bloodiest scenes in guerrilla warfare were perpetrated in the vicinity of the Gap. The mineral wealth of these mountains is believed to be enormous, and, when the organization of industry and the completion of railways through this region opens their hidden resources, it is probable that the results will be extraordinary.

Another remarkable aspect of mountain-scenery in Tennessee attracts us to the southern border of the State, in the vicinity of the thriving city of Chattanooga. Between and around the bases of towering heights winds the swift and tumultuous Tennessee River, a journey on which well repays one in the scenes of beauty that successively unfold themselves to the eye. From the house-windows of Chattanooga the lofty form of Lookout Mountain, one of the historic heights of the country, may be seen lifting itself majestically in its escalade of the clouds. Let us make the ascent and gaze on a scene which, whether from its magnificent beauty or its historic association, is well worthy of the deepest interest of the tourist.

A drive of about two miles southward from Chattanooga brings us to the base of the mountain, and here we begin the long, sloping ascent. As we ascend, forms of the most varied and striking character are displayed in the cliffs and ravines of the mountain, and superb prospects of the far valley and the winding Tennessee gleam through the net-work of trees. The journey up Lookout is continually and pleasantly interrupted by lovely picturesque half-glimpses and broken vistas. The first sensation of the prospect from the top is merely that of immensity. The eye sweeps the vast spaces that are bounded only by the haze of distance. On three sides no obstacles intervene between your altitude and the utmost reaches of the vision. To your right stretch successive ranges of hills and mountains that seem to rise one above



Cumberland Gap, from Eagle Cliff.

another until they dispute form and character with the clouds. Your vision extends, you are told, to the great Smoky Mountains of North Carolina, which lie nearly a hundred miles distant. The whole vast space between is packed with huge undulations of hills, which seem to come rolling in upon your mountain-shore, like giant waves. It is, indeed, a very sea of space, and your stand of rocks and cliffs juts up in strange isolation amid the gray waste of blending hills. Directly before you the undulations are repeated, fading away in the far distance where the Cumberland Hills of Kentucky hide their tops in the mists of the horizon. Your eye covers the entire width of Tennessee; it reaches, so it is said, even to Virginia, and embraces within its scope territory of seven States. These are Georgia, Tennessee, Alabama, Virginia, Kentucky, North and South Carolina. If the view does in truth extend to Virginia, then it reaches to a point fully one hundred and fifty miles distant. To your left the picture gains a delicious charm in the windings of the Tennessee, which makes a sharp curve directly at the base of the mountain, and then sweeps away, soon disappearing among its hills, but at intervals reappearing, glancing white and silvery in the distance, like great mirrors let in to the landscape.

Lookout Mountain presents an abrupt precipice to the plain it overlooks. Its cliffs are, for half-way down the mountain, splendid palisades. The mountain-top is almost a plateau, and one may wander at his ease for hours along the rugged, broken, seamed, tree-crowned cliffs, surveying the superb panorama stretched out before him in all its different aspects. The favorite post of view is called the "Point," a plateau on a projecting angle of the cliff, being almost directly above the Tennessee, and commanding to the right and left a breadth of view which no other situation enjoys. Beneath the cliff, the rock-strewed slope that stretches to the valley was once heavily wooded, but during the war the Confederates denuded it of its trees, in order that the approaches to their encampment might be watched. It was under cover of a dense mist that Hooker's men on the day of the famous battle skirted this open space and reached the cover of the rocks beyond, which they were to scale. The "battle above the clouds" is picturesque and poetical in the vivid descriptions of our historians, but the survey of the ground from the grand escarpments of the mountain thrills one with admiration. It is not surprising that Bragg believed himself secure in his rocky eyrie, and the wonder must always remain that these towering palisades did not prove an impregnable barrier to the approach of his enemy.

On the summit of Lookout Mountain the northwest corner of Georgia and the northeast extremity of Alabama meet on the southern boundary of Tennessee. The mountain lifts abruptly from the valley to a height of fifteen hundred feet. It is the summit overhanging the plain of Chattanooga that is usually connected in the popular imagination with the title of Lookout, but the mountain really extends for fifty miles in a southwesterly direction into Alabama. The surface of the mountain is well wooded, it has numerous springs, and is susceptible of cultivation. In time, no doubt, extensive farms will occupy the space now filled by the wilderness. There is a small settlement on the crest of the mountain, consisting of two summer hotels,

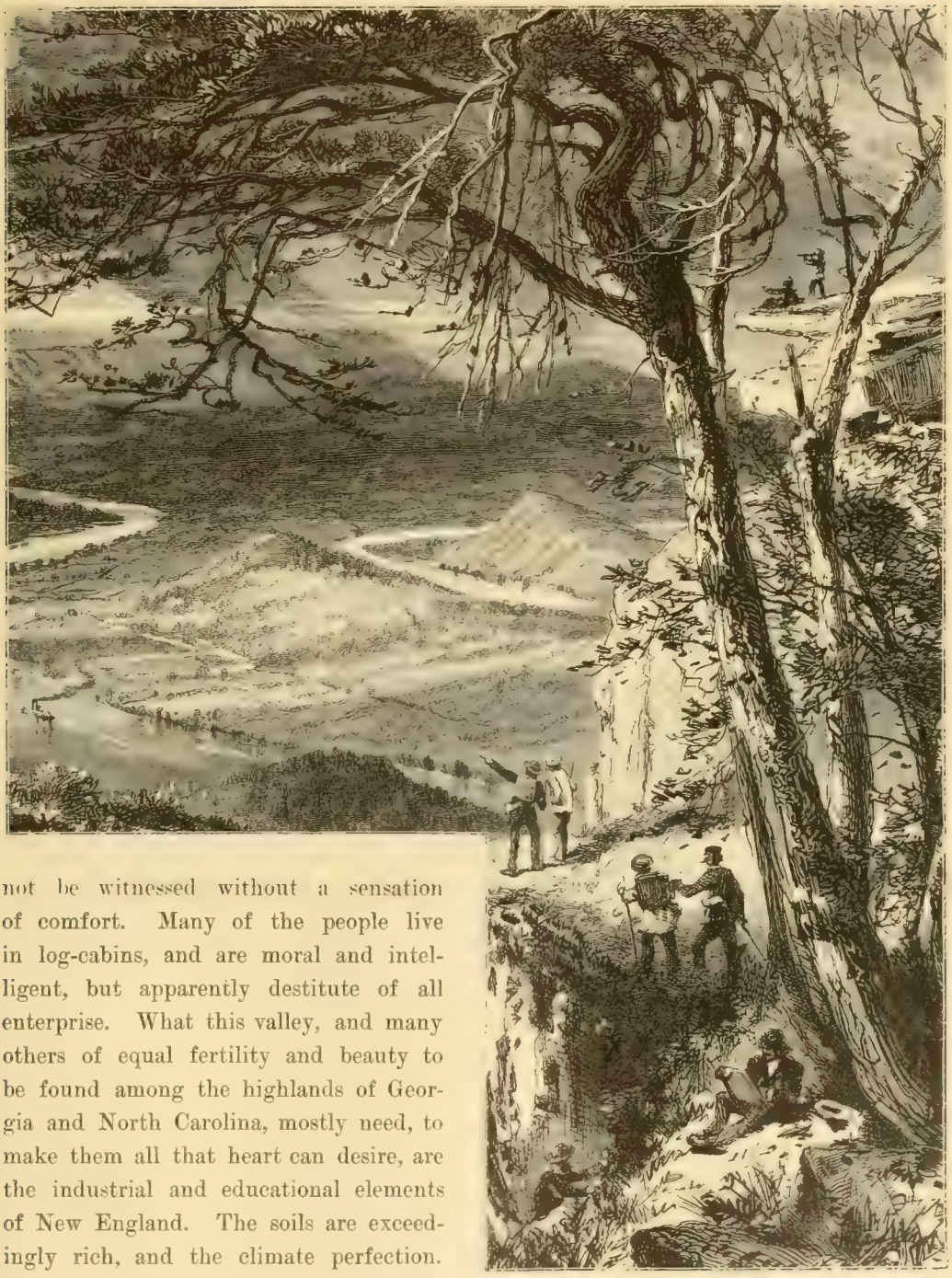
several cottages and cabins, and a college. It is a grand place for study, and the young people of this sky-aspiring academy have certainly superb stimulants in the exhilarating air and glorious scenes of their mountain *alma mater*.

There are several inns, or hotels, as they more pretentiously call themselves, on or near the summit of the mountain. These in the summer season are thronged with visitors, either permanent or transient, who come up for a day's search of the picturesque from Chattanooga. The majority, however, only stay on Lookout Mountain for an hour or two, and consequently miss some of the many attractions of the visit. Among the striking features may be mentioned a lake and cascade of uncommon beauty, about six miles away from the Point, and a singular grouping of rocks known by the name of Rock City. Here we see great rocks of the most fantastic shapes, arranged in avenues like the streets of a city; and, indeed, names have been given to some of the thoroughfares in this city of the Gnomes, where you may travel between huge masses of the quaintest architecture. Sometimes these rock-buildings are nearly square, and look like the fronts of imposing city mansions, and then again they show the greatest caprice and license. Some overhang their bases in ponderous balconies, others stand balanced on apparently frail pivots of rock, and seem to reverse all the laws of gravitation. So odd and strange are the effects made by this mimic city on the fancy, that one would not be surprised to see this silent, shadowy, deserted place burst at once into all the forms of some strange life, like the cities of the fairy legends that lie under a magician's spell.

Lookout Mountain is generally remarkable for its oddly-shaped rocks. Near the Point are two eccentric examples. The Devil's Pulpit consists of large slabs of rock piled on one another in strange confusion, and apparently ready to topple over. Another is called Saddle Rock, from its fancied resemblance. It is supposed that these queer rock-forms, jutting so far above the palisades below, are remains of a higher wall of cliff which has been worn away during the passage of countless centuries.

One of the most important elements in the view from Lookout Mountain is the curving Tennessee, whose swift current passes in devious windings through a long stretch of mountainous country. The Tennessee is formed by the union of the Clinch and the Holston Rivers at Kingston, and together with its affluents reaches a length of eleven hundred miles. Steamers navigate different portions of the river, but there are difficulties of navigation which prevent their passage of the whole consecutive length of the stream.

The mountainous regions of Georgia, though not on the whole nearly so grand or picturesque even as those of North Carolina and Tennessee, have their own charm, and amply repay the visit of the tourist. The Owassa River, in Northwestern Georgia, is a tributary of the Tennessee, and is a clear, rapid, and beautiful stream. It is quite circuitous in its course, and the valley through which it runs is fertile, partially cultivated, and hemmed in with mountains that roll away to the sky, very much like some of the mountains of Vermont. The accompanying view is perhaps as characteristic as any that could be selected, and the spirit of peace which rests upon it can



View from Lookout Mountain.

not be witnessed without a sensation of comfort. Many of the people live in log-cabins, and are moral and intelligent, but apparently destitute of all enterprise. What this valley, and many others of equal fertility and beauty to be found among the highlands of Georgia and North Carolina, mostly need, to make them all that heart can desire, are the industrial and educational elements of New England. The soils are exceedingly rich, and the climate perfection. It is but seldom that a foot of snow covers the earth in the severest winters; and, though the days of midsummer are very warm, they are seldom sultry, and the nights are sufficiently cool to make a blanket necessary. Fevers and other diseases

peculiar to the sea-slope of the Alleghanies are hardly known among the inhabitants, and hitherto the majority of people have died of old age. Fruits of all kinds are abundant, and the apple and peach arrive at great perfection; and out of the latter they manufacture very good and palatable brandy. The surrounding mountains are covered with luxuriant grass, even to their summits; for in the forests there is a scarcity of undergrowth (as is the case in our Northern forests), so that the whole country is a pasture-land, capable of feeding a hundred-fold more cattle than have



View on the Owassa.

hitherto been raised in the country. Connected with the river Owassa, there is a geological fact worth mentioning. Running directly across a little hamlet, which stands at the mouth of the river, is a belt of richly variegated marble, which belt crosses the Owassa. Just above this rich and solid causeway, or dam, the river, for about two hundred feet, is said to be over one hundred feet deep, and at one point, according to the old story, it is bottomless. When the people there begin to discuss the subject, they universally express the opinion that there is a subterranean passage between the deep hole in the Owassa and the river Notely, which is two miles dis-

tant; and the testimony adduced in proof of this theory is, that a log which had been cut and marked on the Notely was subsequently found floating in the Owassa.

But nowhere in Georgia can there be seen such a novelty of mountain-scenery as Tallulah Chasm, in the northeastern part of the State. This Cherokee name means the *terrible*, and was originally applied to the river on account of its magnificent falls. A tributary of the Savannah, and rising in the Alleghanies, it runs through a mountain-land, and is narrow, deep, clear, cold, and subject to every variety of mood. During the first half of its career it winds among the hills in uneasy joy, and then, for several miles, it wears a placid appearance, and you scarcely hear the murmur of its waters. Soon tiring of this peaceful course, however, it narrows itself for an approaching contest, and runs through a chasm whose walls, about two miles in length, are for the most part perpendicular. After making five distinct leaps, as the chasm deepens, it settles into a turbulent and angry mood, and so continues until it leaves the gorge and regains its wonted character. The accompanying sketch gives us a view of the chasm at its lowest extremity. The total fall of water, within the two miles mentioned, has been estimated at four hundred feet, and the several falls have been named Lodore, Tempesta, Oceana, Horicon, and the Serpentine. What they have done, that they should have been so wretchedly christened, has always been a mystery. At this point the stream is exceedingly winding, and the granite cliffs on either side vary in height from six hundred to nine hundred feet, while the mountains which back the cliffs reach an elevation of fifteen hundred feet. Many of the pools are very large and deep, and the walls and rocks are everywhere covered with the most luxuriant mosses. The vegetation of the whole chasm is in truth particularly rich and varied; for you may find here not only the pine, but specimens of every variety of the more tender trees, together with lichens, and vines, and flowers, which would keep a botanist employed for half a century. Only four paths have been discovered leading to the margin of the water, and to make either one of these descents requires much of the nerve and courage of the samphire-gatherer. Through this immense gorge a strong wind is ever blowing, and the sunlight never falls upon the cataracts without forming beautiful rainbows, which contrast strangely with the surrounding gloom and horror; and the roar of the water-falls, perpetually ascending to the sky, comes to the beholder with a voice that bids him to wonder and admire.

With regard to the more striking features of this chasm, next to its falls, may be mentioned the Devil's Pulpit, the Devil's Dwelling, the Eagle's Nest, the Deer-leap, Hawthorne's Pool, and Hank's Sliding-place, whose several names convey an idea of their characteristics or associations. After emerging from its magnificent chasm, the Tallulah River runs quietly through a beautiful vale, which is so completely hemmed in with hills as to be quite inaccessible to a vehicle of any description. In this narrow valley stands a solitary cabin, which, though now deserted and forlorn, was once the happy home of Adam Vandever, the Hunter of Tallulah. He was a small, weazen-faced man, and wore a white beard. He was born in South Carolina, hunted for many years in Kentucky, and spent the last thirty years of his life in the wilds of



Tallulah Chasm, Georgia.

Georgia. By way of a frolic he took part in the Creek War, and is said to have killed more Indians with his single rifle than any other white man in the army. He was married three times, and delighted to talk about his thirty-two or three children. During the summer he cultivated his land, and his live-stock consisted generally of one mule, half a dozen goats, and a number of dogs. His favorite game was the deer, of which he claimed to have killed four thousand, but he was quite ready always to kill whatever might cross his path. In all his winter hunts, when absent for weeks at a time, his mule, which he honored with the name of The Devil and Tom Walker, was his sole companion, and he is said to have brought home, as the result of a single winter campaign, not less than six hundred peltries and skins, consisting of those of the bear, the black and gray wolf, the panther, the wild-cat, the fox, and the 'coon. In politics, which he despised, he went for men and not principles, and, from the time that he fought under General Jackson until his death, he continued to vote for him for President at every subsequent election. That the hunting-stories of such a man were full of interest can be readily imagined.

That a place like Tallulah should have an Indian legend associated with it was to be expected. Many generations ago, according to the Cherokees, it so happened that several famous hunters, who had wandered from the West toward the Savannah River, never returned. The curiosity and fears of the nation were excited, and they sent a delegation of medicine-men to go and find the lost hunters. They visited the East, and when they returned they reported that they had discovered a dreadful chasm in a strange part of the country. They said it was a very wild place, and inhabited by a race of little people, who dwelt among the rocks and under the water-falls; that they were the enemies of the Cherokee nation; and they knew that these little people had decoyed the missing hunters to death in the waters of Tallulah. In view of this legend, it is worthy of remark that the Cherokees, before departing for the far West, always avoided the Falls of Tallulah, and were never found hunting or fishing in their vicinity.



Mouth of St. John's River, Florida.

THE LAND OF ORANGE-GROVES.

The American Italy—Situation and climate—Jacksonville—A trip up the St. John's and the Ocklawaha—St. Augustine: its history and traditions—The St. Augustine of to-day—The gardens and fruits of Florida—The banana, and how it grows—The orange-culture—Florida vegetation—The "cracker" class—The principal points of interest in the State—Key West—Indian River—Hunting in Florida—Lake Okechobee—The Everglades.

Both in its traditions and natural features Florida is one of the most interesting States in the Union. Though the first settled and blessed with the most genial of climates, yet the greater part of the State is to-day a wilderness, though a wilderness marked by the most picturesque and unique features. The early history was one long romance of battle and massacre, and the later records are not less interesting. The Spaniards, who were the earliest white visitors, were much impressed with its scenery and the weirdness of its wilds, and as they arrived on Easter-Sunday, which they called "Pascua Florida," they commemorated the day by giving the new territory the name of the sacred festival.

Time was when Florida was an immense sand-bar stretching into the Gulf of Mexico, and probably entirely barren. But under the influence of the delicious semi-tropical climate, which makes Florida one of the paradises of the world, the seeds, which were freely borne to it on the winds and waves and by the myriads of birds that find a resting-place here, at last clothed it with luxuriant vegetation interspersed with tracts of barren sand. The absurdity of the prevalent notion that the landscapes of tropical and semi-tropical scenery are superior in richness of vegetable growth to those of temperate climes is nowhere better illustrated than in Florida. In hot regions there is only an abundant growth of plants where there is plenty of moisture. It is only in the north that the whole face of the country glows with greenery. In the tropics there is a profuse production of flowers and plants only in

the swamps and forests, where the heat and blaze of the sun are somewhat modified. In such recesses we have in Florida the wildest effects. Flowers, vines, and foliage, strange plants and gigantic trees literally weighted down with gorgeous parasites, delight the eye, and the air is heavy with rich odors. But these are in hidden places, while the open landscape is for the most part arid and sandy.

Our American Italy, as Florida may justly be called, has not a mountain within its boundaries. Extending from twenty-five degrees to thirty-one degrees north latitude, its area is sixty thousand miles. Nearly four hundred miles in length, it lies nearly in the same parallels with Northern Mexico, the Desert of Sahara, Central Arabia, Southern China, and Northern Hindostan. But its heats are so tempered by the Gulf Stream on the one side and the Gulf of Mexico on the other, that the air is balmy and delightful. Over the level breadth, one hundred and thirty miles between the two waters, odorous and health-giving ocean-winds blow continually, and under their influence and that of the genial sun all moist places are clad in a sub-tropical vegetation. Florida is the home of the palmetto and cabbage-palm, the live-oak and the cypress, the mistletoe and Spanish moss, the mangrove and the stately magnolia, the orange, the pineapple, the banana, the myrtle, the jasmine, the cork-tree, the grape, and the cocoa-nut. In different portions of the State, according to the latitude, the finest fruits of the temperate and tropical zones flourish luxuriantly. Winter and summer the climate is delicious, and hitherward flock invalids from all portions of the United States, and to some extent from Europe, to breathe its soft and healing air

We will invite the reader to accompany us in a hasty trip to visit those scenes and features of Florida which possess the most interest, though in doing so we shall be obliged to pass over places and characteristics which urge a strong claim on our attention. Let us begin with the St. John's River, which for many miles is more like a broad estuary than a mere river. This great river, which rises in the Everglades of Southern Florida, flows north for a distance of four hundred miles, and empties into the ocean. Jacksonville, the largest city of Florida, is situated about twenty-five miles above the mouth of the river, with a population of some fifteen thousand inhabitants. From December till April the population is doubled on account of the influx of those who come in search of a genial winter climate. The river at this point makes a crescent bend like that of the Mississippi at New Orleans. Here the river is two miles broad, though it expands to eight miles farther up the stream. The bar at the mouth of the river is nearly always practicable for large ocean-steamers, and they run with ease to Palatka, sixty miles above Jacksonville. The journey from the river's mouth is pleasant in the extreme—past Baton Island, the home of the river pilots and the site of two light-houses; past the mounds of oyster-shells surmounted with tangled shrubbery; past the white domes which glitter under the sun and look weird and ghastly under the moon; and past the spot where once stood old Fort Caroline, the scene of the massacre by the Spaniard Menendez of the French Huguenots.

The city of Jacksonville is well laid out, more after the Northern than the Southern plan, and has all the comforts, conveniences, and luxuries of a city of much greater size. Mr. Edward King, in "The Great South," gives us the following vivid and pleasant picture of the city:

"Imagine yourself transferred from the trying climate of the North or Northwest into the gentle atmosphere of the Floridian Peninsula, seated just at sunset in an arm-chair, on one of the verandas which overlook the pretty square in Jacksonville. Your face is fanned by the warm December breeze, and the chippering of the birds mingles with the music which the negro band is playing in yonder portico. The lazy, ne'er-do-well negro boys, playing in the sand so abundant in all the roads, have the unconscious pose and careless grace of Neapolitan beggars. Here and there among the dusky race is a face beautiful as was ever that of olive-brown maid in Messina. This is the South, slumberous, voluptuous, round, and graceful. Here beauty peeps from every door-yard. Mere existence is pleasure; exertion is a bore. Through orange-trees and grand oaks thickly bordering the broad avenues gleams the wide current of the St. John's River. Parallel with it runs Bay Street, Northern in appearance, with brick blocks on either side, with crowds of smartly dressed tourists hurrying through it, with a huge 'National Hotel,' with banks, with elegant shops. Fine shell roads run out beyond the town limits in either direction. Riding toward the river's mouth, which is twenty-five miles below the town, one comes to marshes and broad expanses of luscious green thicket."

The St. John's is as capricious as a coquette, a fact illustrated in the Indian name Il-la-ka, that is, "It has its own way." The flat, low banks are fringed with a wealth of exquisite foliage, and one passes for hundreds of miles through a forest of cypresses, swathed in moss and mistletoe; of graceful palms and palmettoes lifting their plumes high above their brethren; of white and black ash, magnolia, oak, poplar, and plane trees; and where there are hammocks we see groves of the olive, the cotton-tree, the juniper, the red cedar, the sweet-gum, and the live-oak shooting up their splendid stems. Among these and intertwined with them are a countless variety of flowering shrubs and vines. Close to the shore we see through the tangled thickets the gleaming water, out of which rise innumerable cypress-knees, looking exactly like so many champagne-bottles set in the current to cool. Herons and cranes watch saucily from the river-bank, and monster turtles and still more monstrous alligators glide slowly along, only to duck their heads at the flash of the gun or pistol. On the way up the river we pass noted health resorts such as Mandarin, Hebomia, Magnolia, and Picolata, which have their quota of invalids. Near Magnolia is Green Cove Springs, famous for curing rheumatism and a hundred other complaints. It is composed of a series of warm sulphur-springs, in some cases twenty-five feet deep, the water being pale blue and transparent. It was, perhaps, some rumor of the virtue of these springs which gave Ponce de Leon his belief in the Fountain of Youth.

Palatka, the largest town on the river above Jacksonville, which is the point of departure for the upper St. John's and the Ocklawaha Rivers, is noted for the bland-

ness of its climate, and is a resort for consumptives, only less popular than Jacksonville and St. Augustine. Here the vegetation begins to be more characteristically tropical, and the river narrows to a moderate-sized stream, which characteristic it re-



Night Scene on the Ocklawaha River.

tains except where it widens into Grand Lake George, Dexter Lake, and Lake Monroe at Enterprise.

Twenty-five miles above Palatka the Ocklawaha River empties into the St. John's after flowing nearly three hundred miles. The channel is simply a navigable passage through a succession of small lakes and cypress-swamps. Small steamers are able to

ascend it for two hundred miles. Let us take passage on one of these queer little craft, for an excursion up the Ocklawaha is one of the most unique and interesting experiences possible to the Florida tourist. Our little steamboat, in simple build and rude machinery, might have been the first model made by Fulton. The general outline is that of an ill-shaped omnibus, with the propelling wheel let into its rear. The smoke-pipe, engine, pilot-house, and other appurtenances of the gearing of boats, are all housed, for the excellent reason of protecting them from being torn away by the overhanging limbs or protruding stumps, everywhere to be met with in the difficulties of Florida swamp navigation.

Starting in the wee small hours, a short sail along the St. John's finds us at the mouth of the Ocklawaha about sunrise, the river looking scarcely wide enough to admit a skiff, much less a steamboat. As the light increases, we find our boat passing through a cypress-swamp, the only marks of the channel being the blazed trees. Though the water is deep enough, it is a queer kind of navigation, for the boat goes along bumping against cypress-butts, suggesting in case of disaster a very unromantic fate through the agency of mosquitoes, buzzards, moccasin-snakes, and alligators.

Novel pictures present themselves at every turn. Now we reach a spot a little higher than the water-level, covered with a dense growth of lofty palmettoes. They shoot up tall and slender, bearing a mass of innumerable parasites. In some cases the eye is delighted by patches, half a mile in length, of the convolvulus carried on the palmetto-grove as on a lattice, the whole a mass of lovely blossoms. A sharp turn in the sluggish channel reveals another scene. The wreck of a huge dead cypress is discovered, its gaunt limbs covered with buzzards, waiting for the decomposition of an alligator, which some sportsman has shot and bequeathed as a banquet to these useful but loathsome birds, the scavengers of tropical regions. Sometimes we enter what seems to be a cavern, so thickly are the tree-tops and the vines interlaced into a solid roof. The Florida swamps are as rich in birds as in vegetation, and Audubon found here one of his finest fields as a hunter-naturalist. The water-turkey or snake-bird is seen everywhere sitting on some projecting limb, the body concealed as much as possible from view, and the long head and neck projected in search of prey. You fire at the queer bird, and it falls apparently helpless into the water. On rowing to the spot your prey has disappeared, but you suddenly see the long, snaky head just protruding above the surface a hundred yards away. The white crane is also a conspicuous bird as it stands out in deep relief against the black shadows of the cypress, and proudly stalks about, studying the Styx-like waters for prey. Its special tidbit is the young of the innumerable water-snakes which abound, and it pays hungry attention to the slimy, disgusting young moccasins, which have a taste for sunning themselves, everywhere the light shines through the tangled arches of the swamp.

But the most interesting object in these out-of-the-way retreats is the alligator, who finds a paradise in the Florida swamps. Here he has no occasion, as in Louisiana, to retire into the mud to escape the winter cold, but basks in the warmth of



A Florida Swamp.

the upper world the year round. It is comical and provoking to see one of these huge creatures, when indisposed to get out of the way, turn up his piggish eyes with an indifferent look, as a rifle-ball strikes his mailed sides, and hardly give a grunt in recognition of the salute. Like Achilles, however, he has one vulnerable spot, which is just in front of the place where the huge head works on the spinal column, and, knowing this, an experienced hunter rarely lets one of these reptiles escape him.

In our devious course through the swamp, perhaps we come on a cigar-box nailed to a tree, bearing the magic letters U. S. M. This is the primitive post-office of the region, where the "swampers" leave their soiled notes and crooked writing to be conveyed to their addresses by the first comer. The little steamer goes bumping from stump to stump, and continually stirs up the inhabitants of the watery wilderness,



A Scene on the Ocklawaha River.

frightening the countless crows, and scattering the snakes and wood-ducks on the surface of the water. Innumerable paroquets chattering in the feathery crowns of palmetto-trees scream out their indignation, and flash their green and golden plumage wherever the sun shines through an open space.

By-and-by it begins to get dark, and it becomes a mystery to know how the pilot is going to steer his charge through the pitch-black mystery of the swamp. While thus speculating, there flashes across the landscape a bright, clear light. From the most intense blackness we have a fierce, lurid glare, presenting the most picturesque groups of overhanging palmettoes, draped with parasites and vines of all descriptions; prominent among the latter is the scarlet trumpet-creeper, overburdened with wreaths of blossoms, and intertwined again with chaplets of purple and white convolvulus,

the most minute details of the objects near being brought out in a sharp red light against the deep tone of the forest's depths. But no fancy can conceive the grotesque and weird forms which constantly force themselves on your notice as the light partially illuminates the limbs of wrecked or half-destroyed trees, which, covered with moss, or wrapped in decayed vegetation as a winding-sheet, seem huge unburied monsters, which, though dead, still throw about their arms in agony, and gaze through unmeaning eyes upon the intrusions of active, living men.

Another run of a half-mile brings us into the cypress again, the fire-light giving new ideas of the picturesque. The tall shafts, more than ever shrouded in the hanging moss, look as if they had been draped in sad habiliments, while the wind sighs through the limbs; and when the sonorous sounds of the alligators are heard, groaning and complaining, the sad, dismal picture of desolation is complete.

A sharp contact with a palmetto-knee throws around the head of our nondescript steamer, and we enter what appears to be an endless colonnade of beautifully proportioned shafts, running upward a hundred feet, roofed by hanging ornaments, suggesting the most striking effect of Gothic architecture. The delusion is increased by the waving streamers of the Spanish moss, which here and there, in great festoons of fifty feet in length, hang down like tattered but gigantic banners, worm-eaten and moldy, sad evidences of the hopes and passions of the distant past. So impressive are these wonderful effects of a brilliant light upon these Florida swamps, that we almost forget to look for the cause of the artificial glare, but, when we do, we find a faithful negro has suspended from cranes iron cages, which hold fat-pine knots, kept constantly replenished. These blaze and crackle, and transform the dense darkness into the most weird and novel views of Nature.

By-and-by we arrive at the special goal of our strange journey, the celebrated Silver Spring. We find our rude craft in a basin possibly a quarter of a mile in diameter, entirely surrounded by gigantic forest-trees, which repeat themselves with the most minute fidelity in the perfectly translucent water. For sixty feet downward we can look, and at this great depth see duplicated the scene of the upper world, the clearness of the water assisting rather than interfering with the vision. The bottom of this basin is silver sand, studded with pale emeralds, odd formations of lime-crystals—a bed of white coral in forms and color that remind us of cunningly wrought silver baskets. This we soon learn is the wonderful Silver Spring of which we have heard so much, which every moment throws out its thousands of gallons of water without making a bubble on the surface.

Procuring a "dug-out," and provided with a gun, we proceed to inform ourself of the mysteries of the spot. The transparency of the water is ever a constant wonder. A little pearly-white shell, dropped from the hand, works its zigzag way downward, becoming in its descent a mere emerald tint, until, finding the bottom, it seems to be a gem destined for ever to glisten in its silver setting.

Noticing the faintest possible movement on the surface of the basin at a certain point, we conclude that that must be over the place where the great body of the

water enters the spring. So, paddling to the spot, and wrapping a stone, weighing about eight ounces, in a piece of white paper, we drop it into the water at the place where the slightly perceptible movement is visible. The stone goes perpendicularly down for some twenty-five feet, until it reaches a slight projection of limestone rock, where it is suddenly, as if a feather in weight, forced upward in a curving line some fifteen feet, showing the tremendous power of the water that rushes out from the rock buried under this bed of burning sand. Perhaps the most novel and startling feature is when our craft comes from the shade into the sunshine, for then, looking over the sides of the canoe, we recoil at the sensation *of floating in the air*. For it seems as if we are, by some miraculous power, suspended seventy feet or more in the mid-air, while down on the sanded bottom is a sharp, clear *silhouette* of man, boat, and paddle. A deep river a hundred feet wide is created by the water of this spring, which in the course of seven miles forms a junction with the Ocklawaha, and then continues to run side by side for another mile, without mixing its clear, pellucid water with the coffee-stained flow of the other stream, which, like most of the rivers of Florida, is heavily charged with alluvial and vegetable matter.

Returning down the Ocklawaha to the St. John's, we are tempted to continue our journey up the river, which becomes narrow, except where it widens into lakes, such as Lake George, a few miles above the mouth of the Ocklawaha, Dexter's Lake and Lake Monroe at Enterprise. The latter-named town is the head of steamboat navigation on the river, and is one point of departure for the celebrated Indian River region, the sportsman's paradise of Florida.

Lake George is a beautiful sheet of water, worthy of its namesake in Northern New York. It is twelve miles wide and eighteen miles long, and the surface is dotted with charming islands. Among them is one, seventeen hundred acres in extent, which contains one of the largest orange-groves in the world. All along the lake the eye is delighted and the ear charmed with the brilliant plumage and the sweet songs of Southern birds. At the southern end of Lake George lies Drayton's Island, where there are some remarkable Indian mounds. Thence the river passes into Dexter Lake, surrounded by wild and seemingly limitless marshes and hammocks. Beyond this lake the St. John's becomes a very narrow channel, whose banks are clothed with the universal palm, the wild sugar-cane, and the tall sedge of the marshy meadows. All along this lake there are fine shooting and fishing, and the invalid who comes pale and racked with a harrowing cough is, after a few weeks, seen tramping about in the cool of the morning, gun and fishing-rod in hand, a veritable Nimrod and Izaak Walton combined.

Although Enterprise is the end of regular navigation, the daring sportsman is tempted by still another hundred miles of narrow river, deep lagoons, gloomy bayous, and wild, uninhabited wilderness. Here are all sorts of game, from the bear and panther to wild turkeys and ducks, and the waters swarm with delicious game-fish. During the winter season small, light-draught steamers pass up through Lake Harney to Salt Lake. These lakes, though considerable in extent, are so shallow that no

boat drawing more than two feet of water can navigate them. Beyond Lake Harney the St. John's River is lost in the savannas and swamps where it has its rise.

Let us retrace our journey on the St. John's, and return to Tocoi, fifty-seven miles above Jacksonville, where a curiously primitive horse-railroad carries the traveler to St. Augustine, fifteen miles distant. Out through a seemingly interminable forest leads the straight road, bordered by pines and palmettoes. Occasionally, in some opening, may be seen a little sugar-plantation, or an old mill, half buried in the tropical vegetation. The track is built partly of iron partly of wooden rails, and the journey on the whole is comfortable, in spite of the simplicity of the conveyance. The conductor tells us that he sometimes comes within one of running over an alligator that



View on the Upper St. John's.

lies basking on the track, or receives a salutation of growls from a black bear as it disappears in the forest. As we approach the suburbs of the quaint old Spanish city, there is a fetid odor of decay from the black swamp and stagnant water. Arriving at the Sebastian River—an arm of the sea, flowing in among long reaches of salt marsh, clad in a dingy-yellow grass—the horse-car stops; we are transferred to an omnibus, and we rattle rapidly over the streets to our hotel.

Before looking at the St. Augustine of to-day, let us enhance the fascination of this oldest city of our country by taking a glance at its history, which is as romantic and extraordinary as any fiction ever woven by the fancy.

The beautiful peninsula of Florida has excited the ambition of many nations.

First came the Venetian sailor, Henry Cabot, to whose father Henry VII of England accorded the right to sail all seas under the English flag. This hardy old mariner, blindly wandering in search for the passage to the Indies, touched at Florida in 1497. Early in the next century Ponce de Leon came from Porto Rico, led by the legend of a magic fountain whose waters bestowed eternal youth, and penetrated far into the wilds. The old warrior, who had grown gray in war-harness and borne a gallant part among the mail-clad chivalry of Europe, perished in an ignoble skirmish with the savages. Ponce de Leon christened the State, in virtue of the fact that he landed on Easter-Sunday, amid groves of towering palms and a profusion of flowers. After him came other Spaniards bent on proselyting, crazy with the double lust of gold and winning human souls to their religion, if need be, by sword, fire, and fagot. The Indians were kidnapped and enslaved, but they rose on the early invaders and massacred them to a man. Narvaez, with a little army, marched gallantly into the swamps and lagoons, fought the savages successfully, but finally they were all shipwrecked and drowned while sailing along the treacherous coast. Then came the most noble and heroic of all these figures which haunt the dim twilight of Florida history, the valiant Spanish knight De Soto, who died after discovering the Mississippi.

But no permanent Spanish settlement of Florida was attempted till the year 1565, more than half a century before the landing of the Pilgrims at Plymouth. The founder of St. Augustine, the earliest built of American cities, was Don Pedro Menendez, who to the bravery of the soldier united the cruelty of the religious zealot. He was sent to Florida by Philip II, with a force comprising thirty-four vessels and twenty-six hundred men, with orders to colonize the country and exterminate a French Huguenot settlement which was established at Fort Caroline, near the mouth of the St. John's. After establishing his colony, Menendez sailed for Fort Caroline, carried the place by storm, and slaughtered the garrison to a man. As an excuse for his act, he nailed to the flag-staff the following motto: "Not because they are Frenchmen, but because they are heretics and enemies of God." Subsequent to this atrocious act, another party of Huguenots, under Ribault, was wrecked among the dunes of Anastasia Island, near Matanzas Inlet, and only a few miles from St. Augustine. Menendez went to them with soft words, disarmed their suspicion, and again slew every Frenchman of the party. It was some time before news of these bloody doings got to France, and even then, as the French court party was bitterly Catholic, it was left to the private Huguenot gentleman to avenge the outrages of the Spaniards. Dominique de Gourgues, with some help from Admiral Coligny, fitted out an expedition two years after the massacre at Fort Caroline, and sailed for America. He attacked the Spanish fort and won a signal success. Every prisoner was hung by the stern Huguenot, "not because they are Spaniards, but because they are traitors, robbers, and murderers!" The French did not attempt, however, to establish a colony, but, after destroying everything, sailed away.

Menendez returned, re-established his colony, and seems to have governed it with energy and capacity. On his final return to Spain he was made captain-general of the

navy, and accorded other high honors for his American exploits. The career of this iron zealot in Florida, though stained with such cruelty, was distinguished for its ability, and to him is due the credit of having established the first permanent settlement in the United States.

His selection of St. Augustine as the site for the principal town of the colony showed good judgment. The location is on the Atlantic, on a narrow peninsula formed by the Sebastian and Matanzas Rivers, on the west side of a harbor which is



The City Gate, St. Augustine.

protected from the ocean by the low, narrow Island of Anastasia. While the harbor is large enough to accommodate ships bringing in supplies, it is inaccessible to large vessels, and therefore tolerably free from the danger of hostile attack. In the direction of the land, the estuaries and marshes protected the settlement from the Indians. The great healthfulness of St. Augustine also conduced to the success of the colony. Surrounded by salt marshes and free from miasmas, the balmy and bracing sea-air saved the colonists from those fevers which proved so fatal to European settlers on other parts of the Southern coast.

In 1586 the bold English adventurer, Sir Francis Drake, who looked on it as his peculiar mission to exterminate the Spaniards wherever he could find them, and thus win gold and glory—for there was always good booty in a Spanish settlement—appeared off St. Augustine. He had already been harrying the West Indian settlements, and his arrival caused fear and trembling. His very name carried with it so much dread that mothers hushed their babes to sleep with the song of it. The Spaniards attempted no resistance, but fled to their forts on the St. John's, forty miles above. Drake burned and pillaged the town, and carried off much plunder. The principal buildings at that time were a court-house, a church, and a monastery. After the departure of the English the Spaniards timidly returned and rebuilt the town. But it grew so slowly that in 1647 there were only three hundred families, or fifteen hundred people, including the monks, who swarmed wherever there was a Spanish town. In 1665 there was another attack on St. Augustine, by an English buccaneer, Captain John Davis, who landed the crews of seven small vessels, and pillaged the town, without much resistance from the garrison.

Thirty-seven years after this, Spain and England then being at war, an expedition against St. Augustine was organized by Governor Moore, of South Carolina. The little army consisted of six hundred whites and as many Indian allies, and the plan of operations comprised a march by land of one portion of the force, and an attack by sea of the other. The land-force, under Colonel Daniel, reached St. Augustine first, and easily captured the town, the Spanish governor and the principal citizens taking refuge in the strong fort of St. Marks, which was well garrisoned and provisioned. When Governor Moore arrived with his ships, a combined attack was made on the castle, but its strong walls proved invulnerable to the light-sized guns of the assailants. Colonel Daniel was sent to Jamaica for artillery of heavier caliber, but, while he was gone, two armed Spanish ships appeared in the offing. Governor Moore, fearing that he was likely to be attacked by superior numbers, and his retreat cut off, raised the siege, burned the munitions he could not carry with him, and barbarously set fire to the town. The amenities of warfare were not then preserved very carefully on either side. When Colonel Daniel returned from Jamaica, with re-enforcements and heavy guns, he found himself badly overmatched, and narrowly escaped capture. So he, too, thought prudence the better part of valor, and sailed back to Carolina in disgust, but without the loss of a single man. This bloodless expedition cost the colony of South Carolina the sum of six thousand pounds, and caused the first issue of paper money known in America. In 1727 there was another Carolina raid into Florida, which carried fire and sword to the very gates of St. Augustine, but no attempt was made to attack the city.

St. Augustine successfully defied the assaults of the English, and seemed a charmed spot, though the town had been burned several times. General Oglethorpe, who was Governor of Georgia in 1740, led an expedition against the Spanish city on the declaration of war between England and Spain. He was assisted by South Carolina and six English war-ships. The Governor of Florida, Don Manuel de Monteano, was a



Watch-Tower, St. Mark's Castle.

man of resources and resolution, and, though he had but a small garrison, made a stout defense. Oglethorpe besieged the Spaniards by land and sea for some six weeks, but, becoming satisfied that he could not take the place in a short time, he yielded to the murmurs of his men and his fear of bad weather. He embarked his troops, sailed for home, and added another failure to the long list which marked the English attempts to take Florida.

Two years after, Monteano, the Spanish governor, determined to pay his compliments to the English in turn. Having received re-enforcements from Cuba, he sailed from St. Augustine with thirty-six ships and three thousand men to attack the Georgian settlements. Though he met with some success, he was finally baffled and obliged to sail back to Florida. Oglethorpe, the following year, made a fierce raid into the Spanish dominions, and penetrated to the very gates of St. Mark's Castle. But it was an expedition for spoil and devastation, not for conquest. With such

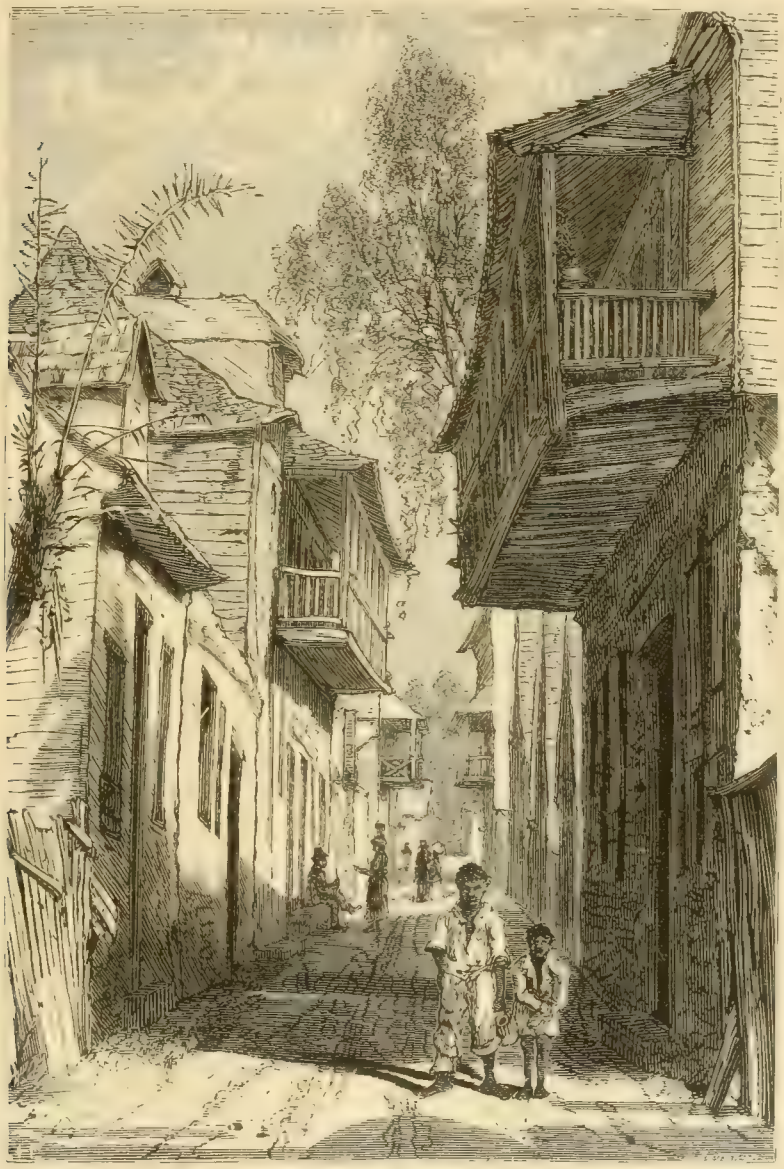
celerity did Oglethorpe move, that he arrived at St. Augustine before his enemies had any warning, and his Cherokee braves scalped forty Spanish soldiers right under the muzzles of the castle guns.

When peace was established, in 1763, Florida was ceded to the English, in return for Havana, which had been captured during the war by an English fleet. At this change of sovereignty nearly all the Floridians removed to Cuba or to Mexico, and the beautiful country was left nearly stripped of people. Great efforts were made in England to promote emigration to the new territory. These schemes were unsuccessful in England; but a project of a Scotchman, Dr. Andrew Turnbull, resulted in gathering a colony of settlers from the shores and islands of the Mediterranean—largely from the Island of Minorca. Fifteen hundred Greeks, Italians, and Minorcans came over in 1767, and were planted at New Smyrna, on the Mosquito Inlet, about ninety miles south of St. Augustine. It was believed that these emigrants from Southern Europe would succeed eminently well in raising the fruits of their native climates in a country so nearly similar to their own. Here they remained till 1776, when their number had been reduced by sickness to about six hundred, and this remnant abandoned New Smyrna in a body and made their way to St. Augustine. Here lots were assigned them, and their descendants still remain there, constituting an interesting and important element of the population. After twenty years of possession, Florida was again made the subject of barter. It was ceded to Spain in 1783, in exchange for the Bahama Islands. St. Augustine at that time possessed about three thousand inhabitants.

Some few English families remained after the evacuation by the British and the entire settlement of Greeks and Minorcans. But most of the English departed, leaving their delightful homes and gardens, we may fancy, with great regret. To use the language of an historian of the State: "All the gardens in the town were well stocked with fruit-trees, such as figs, guavas, plantains, pomegranates, lemons, limes, citrons, shaddocks, bergamot, china, and Seville oranges. . . . Homes embowered among the orange-groves, and made pleasant by the fragrant blossoms of the honeysuckle, acacia, and the rose; a land where Nature had lavished her choicest beauties and created an eternal summer—such was the land on which the unfortunate residents of Florida were obliged to turn their backs for ever." What was then said in glowing description of St. Augustine applies with even greater force at the present time.

In 1821 Florida passed, by treaty, from the dominion of Spain to that of the United States, and there has been but little in its history since worth noting. The romance of St. Augustine has now, for the most part, gone. The merry procession of the carnival, with mask, violin, and guitar; the round figure of the cassocked *padre;* the delicate form of the Spanish lady, clad in mantilla and basquina; the haughty, brilliant cavaliers; the flower-dance, with its blossoms and garlands—all have passed away. The romantic suburbs are now being filled with costly winter villas by Northern residents, and in a few years St. Augustine bids fair to be the Newport of the South. A visitor well describes the effect of a splendid winter day in December: "I seemed

incapable of any effort; the strange fascination of the antique and remote fortress-town was on me. The sunshine penetrated to every corner of my room. There was no broad and unpleasant glare—no impertinent staring on the sun's part—but



A Street in St. Augustine.

a gladsome light, which I have never seen elsewhere. I walked out at noonday: the town seemed transfigured; the shadows thrown from the balconies, from the date-trees, from the thickets of roses, were mystical; I sat down on the grass-grown ramparts near the old fort, and (forgetting the gnats) let the gentle sea-breeze caress my



A Florida Garden.

temples, and memories of by-gone centuries take complete possession of me. At that moment the rest of the world seemed as remote as paradise, vague as Ilium, foreign as the Zendavesta."

The most conspicuous feature of the quaint old town is the time-honored fort of St. Marks, also called Fort Marion. It is built of coquina, a peculiar conglomerate, found on Anastasia Island, at the mouth of the harbor, which is soft when quarried, but grows hard when exposed to the air. It forms a wall well calculated to resist cannon-shot, as it does not splinter when struck. It stands at an end of the town facing the sea, and was a hundred years in building. An inscription on the gateway, carved in the stone, with the arms of Spain chiseled above it, reads as follows: "Don Fernando, being King of Spain, and the Field-Marshal Don Fernando Herida being Governor and Captain-General of this place, St. Augustine of Florida, and its provinces, this fort was finished in the year 1756. The works were directed by the Captain-Engineer Don Pedro de Brazos y Gareny." It is even to-day one of the most striking-looking buildings in the United States. Its castellated battlements; the frowning bastions, with the great guns; its lofty and imposing sally-port, with the royal arms of Spain wrought above; its portcullis, moat, and draw-bridge; the sentry-box at each parapet angle; the commanding lookout tower, and the stained and moss-grown massive walls—all these impress the observer as a relic of the far-away past. Then a ramble through the heavy casemates; through the crumbling Romish chapel, with elaborate portico, and inner shrines and holy-water niches; through the dark passages, gloomy vaults, and more recently discovered dungeons—such a stroll makes you easily believe the many traditions of inquisitorial tortures, of decaying skeletons found in the latest opened chambers, chained to the rusty ring-bolts, and of alleged subterranean passages through to the adjoining convent.

Many of the buildings in the town are quaintly redolent of antiquity. There is the old cathedral, with its belfry in the form of the section of a bell-shaped pyramid, its chime of four bells in separate niches, and its clock, together forming a cross. The date on the oldest of the bells is 1682. The old convent of St. Mary's is an interesting building, and there is the later built convent made of coquina. The United States barracks, which have been remodeled, are said to have been originally a convent. The old government palace is now used as the United States post-office and court-room. At its rear is a well-preserved relic of another old fortification, evidently designed to protect the town from inland attack. A still older house, supposed to have been the Spanish governor's, was pulled down a few years ago.

The fine public square, in the center of the town, is known as the Plaza de la Constitucion, and in the middle of it is a stately monument, built in memory of the liberal Spanish constitution. On the plaza stand the ancient markets, and facing them the cathedral, the old palace, the convent, a modern Episcopal church, and other fine buildings.

Among other features of interest are the old Huguenot burying-ground, and the military burying-ground where lie the remains of Major Dade and the men of his

command who were massacred by Osceola and his band. The whole ocean-front of the city is protected by a fine sea-wall about a mile long, built of coquina with a granite coping. Here is the favorite moonlight promenade of the St. Augustinians. In full view is the old light-house on Anastasia Island, built more than a century ago, and now surmounted by a fine revolving lantern.

The visitor can not but be impressed with the appearance of the city, which is as quaint as its history is romantic. It is unlike anything except an old town of Spain or Italy. You walk through narrow streets, one of which, nearly a mile long, is only fifteen feet wide. One of the principal hotels is built on a street only twelve feet wide, while the widest of all is only twenty-five feet between the walls of the houses. In the warm climate of Florida this narrowness gives shade, and the air draws through them like a flue. Many of the houses, with high roofs and dormer-windows, have hanging balconies along their second stories which seem almost to touch, and allow the families sitting in them to shake hands with their over-the-way neighbors.



The Date-Palm.

The street walls often extend in front of the side garden, or the houses inclose uncovered courts, so that passing through the main entrance you still find yourself in the open air. An occasional lattice-door gives you a peep into a charming court-yard interior, where you see huge stone arches, winding staircases, and the richest profusion of tropical fruits and flowers. All this brings to mind the romantic legends of Spanish damsels, of stolen interviews through the lattice-windows, of elopements by means of forged key or bribed porter, of rope ladders and daring cavaliers vanishing through the chamber-windows. The main streets were formerly well floored with shell-concrete, and so carefully was this pavement swept that the dark-eyed girls of Spain could pass and repass without soiling their dainty little slippers.

The nuns of the two convents now existing are occupied mainly with the educa-

tion of young girls. They also practice the art of making lace, and have introduced the manufacture of hats from the palmetto and wire-grass, both of them very strong and durable material.

In the grounds of all the houses, whether of the old Spanish style or the American buildings, may be seen a perfect wilderness of plants, trees, and shrubs. Here grow, ready for the hands of him who would pluck and eat, every delicious variety of tropical fruit, as well as the peach, the grape, and the melon, of more temperate climes. Among the trees of peculiar form that will attract the attention of the Northern visitor is the date-palm.

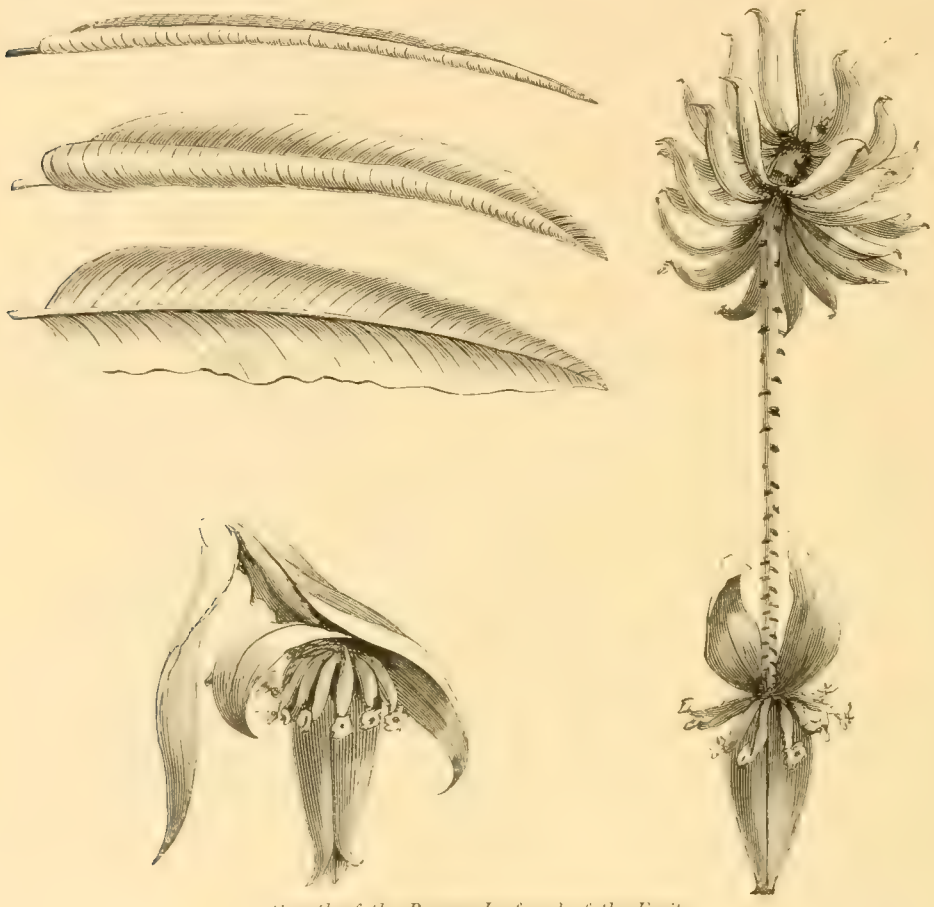
A peculiarity of the trunk of the palm is that it has the same diameter at the top as it has at the base. Its long shaft is ornamented with a capital about six feet high, clothed with branches some fifteen feet long, the leaves of which are arranged like the feather part of a quill. These palms, so essentially tropical in their character and appearance, vary also from the vegetation of northern climates in every intrinsic quality as well as shape. The heart of the palm is pith ; the heart of the northern tree is its most solid part. The age of the palm is legibly written upon its exterior surface ; the age of the northern tree is concealed under a protecting bark. The northern tree, though native of a cold, inhospitable climate, is adapted to give shade ; the palm, with its straight, unadorned trunk and meager tuft of leafy limbs, gives no protection to the earth or to man from the burning tropical sun.

As a typical fruit, and one of the most interesting of the many luscious varieties which grow in a Florida garden, let us take the banana and glance at its various stages of growth. In the winter, perhaps, all we note is a collection of yellow, blasted leaves, as if some fire had swept over them and withered them on the stalk. With the prevailing airs of spring, there suddenly comes from this repulsive stubble-heap evidence of growth, and there at last shoots up, in different places, what appear to be sharp spears of the most livid green. Gaining strength, they seemingly elongate and reach upward, even while under the eye, and, as the heat of the semi-tropical sun increases, the decaying "trash" fairly palpitates with the struggling, rapid growth of what were the roots of the banana, which, from their vigorous wakefulness, seemed to have hibernated rather than temporarily died in the winter months. A few hours make a perceptible difference in their growth, and a day brings forth a new revelation—and thus the brave work struggles on toward perfection.

We find, when the banana is at its full growth, that what appeared to be the trunk was almost wholly composed of the united stems and foliage. On the top of this herbaceous stalk, some nine or ten feet in the air, the wonderful leaves, of a most delicate green, and averaging two feet in width and six in length, radiate from one point, reaching out straightwise a short distance, and then, turning downward, form a parasol, or bower, of the most exquisite beauty, solid enough to afford equal protection from rain or sun. The cone of buds, made up of a succession of rings of flowers, one above the other, completes the structure. The arrangement of these blossoms, obtruding from their soft purple sheaths, enchants the eye by their exquisite

forms, varied colors, and exhilarating odors; but they do more, for they protect and cover the newly-born fruit.

We become aware that the leaf is not only the most important part of the plant, but the only living part, the root, trunk, and branches, being only fibers extending from the leaves. The ingenuity and wisdom displayed in the growth of a leaf six



Growth of the Banana-Leaf and of the Fruit.

feet long can never be fully realized except from observation. This leaf does not develop from a minute inception, and then go on growing until complete, but, startling as it may appear, it is born of the balmy breezes of a single morn.

Growing first as a long, slender shoot, it towers upward several feet as stiff as a rod. If you examine this vegetable line, you will find it apparently a pithy substance, which in time is to harden into solid wood—but such is not the case. When the hour arrives, by some wonderful transformation, the solid green stalk turns into a roll of what is the long banana-leaf. At the appointed time a line of demarkation appears along the entire length of this green stalk, which line, under the coquetting influence of the gentle breeze, soon unfolds itself from the parent-stem, and, to your

astonishment, one half of the gigantic leaf displays itself. This accomplished, you are further surprised to find the remaining half of the leaf has been rolled up alongside of the stem, but now, released from imprisonment, it, in turn, unfolds, and the perfect, magnificent foliage, as if by a miracle, glistens in the sun.

As these great leaves one by one add their power to the general growth, the banana actually swells and heaves with internal power. The sun plays upon their surfaces, and ripens the crude juices, preparing substance for new leaves, and at last the fruit. As the plant advances toward perfection, it becomes an active, living thing, pumping, respiring, and laboring, impelled by an unseen but irrepressible force. The limited number of gigantic leaves are doing the surface-work of the thousands which so gracefully adorn the apple and the oak.

The magnificent bouquet of blossoms finally disappears, and the fruit has formed on the stems. The leafy canopy is now complete, and, receiving the sap that surges upward from the ever-swelling roots, with most subtile chemistry extracts from the ever-enriching sun such aroma as belongs to the growing banana-fruit, imparting to the juices, as needs be, the flavors of the orange, the vanilla, the lemon, and the pineapple.

The cone of expected ripened fruit now towers aloft, and grows in size and importance daily. There it stands, an apex worthy of such a wonder of the wealth of Pomona, boastful indeed, a very braggart in its promise. But soon the tasteless, spongy heart is filled with nutritious juices — the object of its creation approaches consummation. Vanity gives way to utility, and the towering cone of the banana, as if conscious that brilliant display is no longer necessary, gracefully turns its head downward, and thus modestly completes its round of life. The wonderful fruit of the banana, by a law of its existence, remains untouched by insects until it is perfectly ripe. If it is picked green, it comes to perfection in the shade of your house. It is because of this provision that we have bananas as delicate and fresh in taste and perfume in New York as they have them in Jamaica or Matanzas.

Of the many semi-tropical fruits grown in Florida the orange is by far the most important, and its culture is becoming the principal industry of the State. It is found in all sections, as common as the apple in the North, growing in field and garden. It is not known whether it is indigenous to the State, but the weight of opinion is in favor of its having been introduced by the Spaniards, the innumerable wild groves of sour orange having been probably the result of deterioration and neglect.

Though the orange finds in Florida its most favorable conditions, and has always been generally grown, it is only since the late war that special attention has been given to its growth as an important industrial fact of the State. So great has been the development since 1873, when many who had suffered from the financial panic that year were led to invest the wrecks of their fortunes in Florida lands, that to-day this delicious fruit is to the State what cattle are to Texas, corn and pork to Illinois, wheat to Iowa and Minnesota, and peaches to Delaware and New Jersey.

An orange-tree is a beautiful sight at all seasons of the year. It has a straight, shapely, upright trunk, covered with a smooth, sleek, pale-gray bark, and graceful curving branches, which spread in all directions. These are always clothed with a luxuriant foliage of rich, glossy, dark-green leaves where the tree is well cared for. The regular blossoming-time is in the spring, but trees may be seen in blossom at all seasons of the year, and it is not unseldom that one sees on the same tree the blossoms, green fruit, and the ripe golden globes in full maturity. The harvest period is from November to early March, depending somewhat on the season. No more fascinating spectacle, amid the rich productiveness of Nature, can be witnessed than a grove bending with its glowing yellow burden of luscious fruit.



A Florida Orange-Grove.

The orange is a very hardy fruit in its natural habitat and under the right conditions. An interesting fact is that it seems to love human companionship, those trees nearest inhabited dwellings always doing the best, even when all the other conditions are equal. The tree continues to grow until it gets to be about forty years old, and it is estimated that it will yield productively till it has passed its hundredth year. There are many trees known to be eighty years old that still continue to produce enormous crops. They are in fact not in their prime until over twenty years old, and then they increase in productiveness for at least a score of years more.

Though we do not in this article intend to enter into any elaborate description of orange-growing, a few facts about the methods and conditions of culture may be of interest. It is almost beyond a question that to energetic and industrious young men,

with a little capital, no branch of agriculture presents such certainty of large returns with comparatively small difficulty, as raising oranges in Florida. Of course, notable success demands patience, thoroughness, and knowledge of the conditions involved in this as in all other enterprises, but it is less contingent on uncertainties perhaps than any other branch of field or fruit culture, the only danger being the possibility of a frost in the northerly portions of the State.

A great variety of soil is available for orange-culture, but it is important in all cases that it shall be well drained. The price of good orange-lands, in a position convenient to market, has risen very much in a few years, so that it now ranges from five to one hundred and twenty-five dollars per acre. Young trees of the sour-



A Palmetto-Grove.

orange variety (for these are most hardy and vigorous) are generally transplanted to the ground when prepared, and these are budded with the sweet orange, either before or after the transplanting, as the case may be. Of the best varieties there are about a dozen, all of which are in great demand. Careful culture is needed, and the ground should be richly fertilized. The same skill in pruning, the same watchful care against insects and disease are needed, as in the case of Northern fruits, but, while the care is no greater in promoting the growth of the orange, the returns are tenfold greater. It is stated by those having large experience that an orange-grove becomes self-supporting after the fifth year. Thenceforward the crop increases in value every year, until at the end of ten or twelve years the yield should be not less

than ten dollars per tree, or about seven hundred dollars an acre. There are some single trees in Florida which yield a hundred dollars apiece every year to their fortunate owners. Yet with all these advantages, which seem so golden and glowing to the Northern farmer, who toils early and late for a small return, it must not be believed that the orange-culture is a matter of luck, or yields its rewards to the indolent and shiftless man. Skill, energy, and intelligent labor are necessary here for success, as well as in less favored lands.

Of the other fruits which grow luxuriantly in Florida, such as the lemon, the lime, the citron, the bergamot, the fig, the olive, the pineapple, the cocoa-nut, the date, and similar tropical fruits, which grow in all or specific portions of the State, we can only say in passing that they all reward attention and culture.

Everywhere throughout the State the traveler observes trees of unique and peculiar appearance. The palms, both the date and cocoa-nut, raise their tall and stately shafts plumed with crowns of fan-like foliage on the coast line of the southern portion of Florida, and everywhere may be observed the characteristic palmetto, which often occurs in extensive groves. Mingled with these tropical trees are those which are also found in northern climes, such as the pine, the oak, and the hickory. The live-oak of Florida is one of the noblest trees in the world, both in size and symmetry; and, as it is generally garlanded with magnificent wreaths of Spanish moss, it is a spectacle that never fails to impress the imagination.

It does not consist with our limits to enter into any description of the many charming towns in Florida, which invite the invalid or the settler. These places possess attractions and benefits according to the needs and tastes of the individual who desires to utilize them. Fernandina, Jacksonville, St. Augustine, on the Atlantic coast; Pensacola, Appalachicola, St. Marks, Manatee, Cedar Keys, Charlotte Harbor, and Tampa Bay, on the western coast; Key West, amid its cluster of coral islands on the south—all these have separate advantages, and all are delightful resorts.

Key West, which lies off the southern extremity of the State, is in many respects one of the most interesting and important places in Florida. A very flourishing city has grown up on the island, and culture has transformed a barren coral key into a perfect paradise of fruits and flowers. The city is protected by extensive water-batteries, and has a charming park, while on the southern edge of the island towers a noble light-house, a mark of civilization which may be seen on more than one of the Florida keys, otherwise wild and deserted, standing for the benefit of the storm-tossed mariner. The Florida keys, which are dangerous reefs and islands built by the little coral polyp, extend around the southern portion of the State on both sides, and in time of severe storm the breakers are terrific, giving an illustration of the grandeur and danger of the ocean, which one may look in vain to see surpassed.

About Key West everything is strange, foreign, and interesting. The business-houses and public buildings, the dwellings, the gardens, lawns, flowers, trees, soil, and vegetation, the appearance of the residents, their costumes, and even their names, are essentially un-American, and suggestive of a foreign clime and foreign ways. Key



Florida Pine-Barrens.

West is a place of first-rate commercial importance, and supplies the needs of a large section of Southern and Western Florida. Here is located one of the largest cigar-making industries of the country, many hundreds of workmen, mostly Cubans, being employed. It is estimated that the cigar-factories of Key West pay the Government an annual revenue of three hundred and twenty thousand dollars. Thirty million cigars were manufactured here in the year 1880. The Government buildings here are costly and extensive, particularly the dock, barracks, and fort, as Key West is justly regarded as one of the most important defensive positions in the country.



Light-house on Florida Keys.

For the sportsman Florida is a veritable paradise, and the lovers of the gun and rod here find a boundless field for the exercise of their energies. Among the many parts of the State peculiarly attractive to the devotee of field-sports, the Indian River country deserves special mention, as a visit to this charming region involves but little hardship or exposure. This part of the State may be reached either by steamboat from St. Augustine, or up the St. John's River from Jacksonville. From Enterprise, the head of steam navigation on the St. John's, a short stage-journey takes us to Titusville, at the head of Indian River.

This so-called river is a great salt-water lagoon on the eastern coast of Southern Florida, being divided from the tumbling billows of the ocean by a long sand-key. Its length is about one hundred miles, and its width from one and a half to seven miles, while the depth of the channel is from four to sixteen feet; in many cases one is able to wade a half-mile from the shore. The lagoon abounds in every variety of fish native to southern waters, but is specially distinguished for its splendid mullet, the general weight of which is from two to five pounds, though they often reach ten pounds. The pompano the king of fish, the sheep's-head, the red-fish, sea-trout, cava-

lier, and bass, are also plentiful to such a degree that the angler almost tires of exercising a skill which seems to be unnecessary. On the shore of the river, away from the settlements, and on the great sand-bar between it and the ocean, which is covered with hummock-lands and thickets, the hunter finds a profusion of game, such as the bear, the panther, the lynx, the ocelot, the wild-cat, and the deer.

But he who would most enjoy the conditions of hunting-life must cut loose from all the ties of civilization and penetrate far into the interior of the wild and romantic swamps of Southern Florida. As plentiful as is the game in the fine country bordering the Indian River, the sportsman never gets very far away from the haunts of civilization, nor experiences that deep taste of solitude and isolation which is the crowning joy of the true Nimrod.



Indian River.

Let us take some brief pictures from the experiences of Captain Townshend, an English Life-guardsman who, several years ago, spent a few months in the Florida wilds, and wrote an entertaining account of his adventures. He found the climate so fine, and such rich spoil for rod and gun, that even the clouds of mosquitoes and "incredible number of sand-flies, horse-flies, blue flies, fleas, ticks, tarantulas, scorpions, centipeds, rattlesnakes, and moccasin-snakes" did not seriously interfere with his enjoyment. Yet the gallant Guardsman admits that, "although in the excitement of the chase we thought but little of danger, still the whir of the rattlesnake would sometimes send a shudder through us as we forced our way through a dense covert; and a rustle among the dry palmetto-leaves outside our tents at night would cause a thrill of fear to mingle with the silent curses which were wont to

greet the sharp buzz of the intruding mosquito." The southwest, south, and southeast of the Florida Peninsula are still unknown, and rarely visited except by an occasional sportsman, the cattle-herders, and the few Indians who still wander among the Everglade swamps.

The hunter and his guides penetrated to the Myakka Lakes, about twenty-five miles northeast from Tampa Bay. He thus writes of the rich plenitude of bird and beast life in the Florida wilds:

"In the early morning we were daily wakened in our camp, about half an hour before sunrise" (the hunters had found their host's mansion too much afflicted with uncomfortable bedfellows, and erected their tent on the lawn), "by such a chorus of birds and insects as was truly marvelous. At that time all created things seemed to awaken to active life as suddenly as, in these latitudes, day succeeds to night and night to day. The deep, harsh, melancholy whoop of the sand-hill crane, the cry of bitterns, herons, and ibis, the chattering of paroquets, the melody of a thousand song-birds, the hum of millions of insects, all combined in a sudden burst of sound that would have roused the seven sleepers. As the sun quickly mounted above the pine-tops, the various sounds would gradually become hushed, till, during the midday heats all became still as death, again to break forth as the evening sun rushed down to the western horizon, but ceasing as it dipped below almost as quickly as the sound had burst forth in the morning. The silence of the mid-hours of the night was broken by the hoot of the owls, the cry of the night-birds, and the more savage voices of the wolf, the panther, the ocelot, and the alligator; so that during the midday heat alone is there silence in the forests and swamps of Florida, a curious contrast to the oppressive stillness of the vast Northern forests during the daylight hours. When shooting in the Northern States, I have felt the universal silence of the forest absolutely painful, the occasional crash of a falling tree being almost the only sound heard, as the note of song-birds never enlivens those gloomy solitudes.

"In the Northern forests no man on horseback could possibly force a way through without free use of the axe, owing to the accumulation of fallen timber, and the fact of the trees growing so close together as to leave no passing-room; but, in Florida, except in the swamps and hummocks, the forests are so open that a horseman could penetrate from one end of the country to the other, and few of the rivers or swamps north of the Everglades are too deep to ride across in safety."

The sportsman's experience was occasionally of a sort to shake the strongest nerves. The attempt was made to drive the mosquitoes out by burning a circle all around the pine-grove. The dry palmetto-leaves blazed up finely, and the party were congratulating themselves on being rid of their tormentors when one, who was quietly seated plucking a wild-turkey, jumped up with a yell, "It's raining snakes!" as a rattlesnake tumbled down on his head from the palm above, fortunately stupefied by the smoke, which curled in thick clouds above their heads. Several others also fell from the trees later, but with equal harmlessness. A country where rattlesnakes climb trees can not be said to be altogether without its drawbacks.

Such things, however, are only the foil to the brighter side of the picture in the Florida wilderness. Given a hardy constitution, passion for field-sports, and a keen susceptibility to the beauties of nature, the experience of all who have camped out in these sub-tropical wilds is such as to inspire their readers with a pang of envy.

Far down in the Everglades, the almost unknown interior of Florida, surrounded by nearly impenetrable swamps and gloomy forests, lies the mysterious lake of the South, the vast Okechobee. The old Spanish *conquistadores*, Ponce de Leon and Hernando de Soto, both heard of this grand lake from the Indians, and sought to



A Hunter's Camp.

reach it, but without success. The early Indians of the interior looked on it as a symbol of the infinite, and with the sun it shared their worship. The veneration which all the Indians felt for this lake, from swarthy Yemassee to olive Seminole, may account for the anxiety with which they always hid it from the search of their white brethren. Its vastness filled the red-men with awe; and their imagination supplied what they could not discover. It was the paradise of the Indian, his happy hunting-ground on earth. Thus was the lake dotted with wondrously beautiful islands, and the far shores of white and glittering sand bordered a land of crystal fountains, beautiful birds, and flowers.



Lake Okeechobee.

It is probable that the primary source of the St. John's River is found in Lake Okechobee, but for a period of more than a century and a half there seems to have been very little, if any, knowledge of this fine body of water. The early Spanish maps locate it, but it is only within recent years that it has been taken out of the land of myth and made a fixed geographical fact. The lake is supposed now to have been the source of supply for the great quantities of pearls which the early Spanish governors took from the natives. The only mention of the lake in the last century was by Romano, who in 1772 described the adventure of a Spanish soldier who was

made captive and carried to the shores of Okechobee. He afterward escaped and brought back with him marvelous stories. There is a tradition among the Seminoles that the first white man ever seen by their ancestors was on the shore of this lake. He came up out of the water, they said, and then disappeared. This may have been the same captive referred to above. But little was known about the lake till the necessities of war compelled the search of the Everglades about fifty years ago in the pursuit of the warlike Seminoles, who defended their haunts with such desperate courage against their white invaders. During the later Seminole war (1856 to 1858), accurate information was gained of the northern portion of the lake, and there were two small military posts on its shores, but these were afterward abandoned, and the mysterious Okechobee was remanded again to its old seclusion and solitude.

From time to time there came sensational stories of the wonders of the lake from the few who had visited its shores. Ruins of castles and monasteries with carved and ornamented pillars; ruins of Indian cities; dens of pirates, containing untold treasures —all these were found on an island somewhere in the lake. One told of monkeys and baboons, another of moccasin-snakes as long as the sea-serpent. The map prefixed to Williams's "History of Florida," printed in 1838, omitted Lake Okechobee, it may be mentioned, as the author found no sound reason for believing in its existence! Unparalleled as such an ignorance of a body of water with a superficies of twelve hundred square miles, in the center of a State settled nearly half a century before any other State, and which had been governed for years by Spanish, by English, and by Americans, may be, it fairly illustrates the impassable nature of the vast swamps and dense cypresses known as the Everglades.

It was only about ten years ago that a thorough exploration of Lake Okechobee was made, the results of which were published in "Appletons' Journal" by the explorer.

Situated in the midst of the Everglades, Lake Okechobee is a good example of their character, yet we can not leave Florida without a few more words concerning this most interesting portion of an interesting State. There is a great deal of truthfulness and poetry in the name that has been given to the beautiful openings which occur in the swampy scenery of the peninsula of Florida. Formed in a low and yet not absolutely level country, these magnificent examples of semi-tropical richness strike the beholder with surprise; and it seems a waste of Nature's grandest exhibitions to have these carnivals of splendid vegetation occurring in isolated places, where it is but seldom that they are seen by the appreciative eye.

In the wars which have occurred in times past with the natives of Florida, we became familiar with the name of the "Florida Everglade," and have insensibly associated it with the sad reminiscences of massacres and defeats of our troops, under the lead of Scott, Jessup, Taylor, and other of our famous generals who flourished some two-score years ago. These Everglades are places where Nature is most profuse in her gigantic vegetable productions — forest-trees, heaven-towering in height, vines and cactus-plants, struggling for supremacy in the rich soil, and uniting to form these



An Island in the Lake.

strongholds under the protection of which Osceola and other great native chieftains made their most effective struggles for independence, and most severely taxed the patience and courage of our troops; and it was in these places that the savage often gained great but only temporary triumphs.

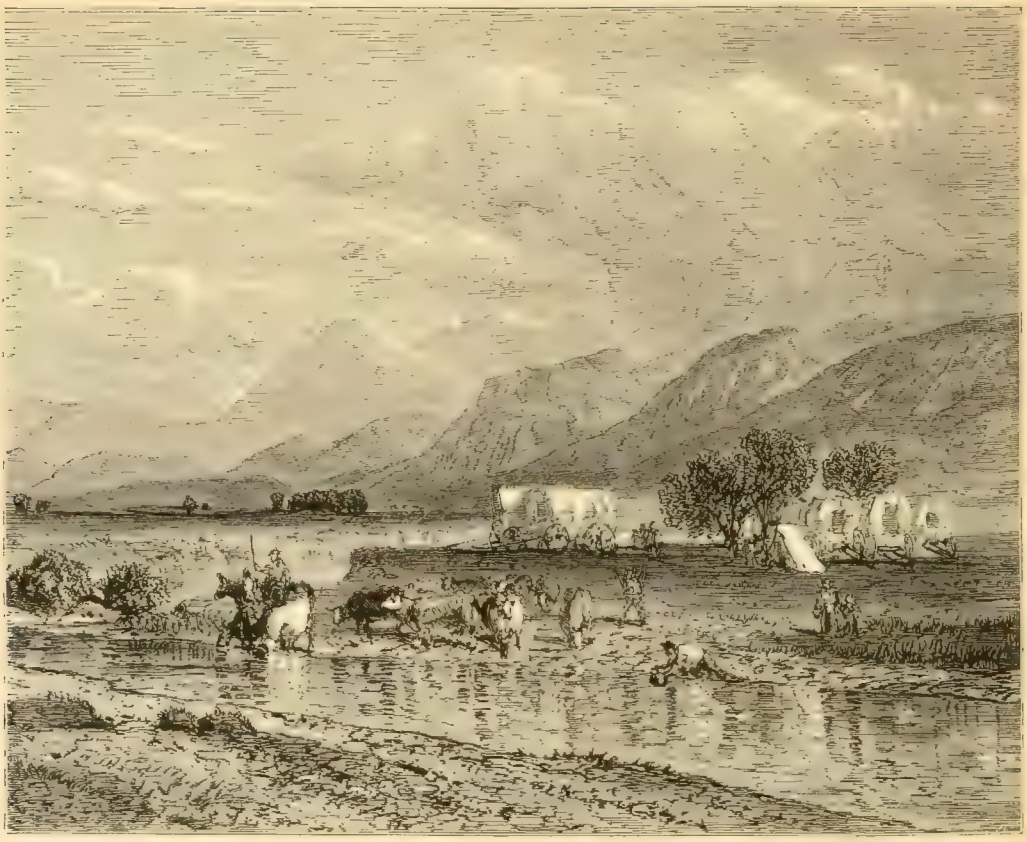
Upon obtruding high ground, associated with these Everglades, grow the grandest live-oaks of the world, the far-reaching branches of an individual tree often extending over a surface of ground equal to the area of a "city square"; while every possible variety of vegetation, in exaggerated proportions, crowds all available space. Parasites

fasten upon projecting limbs, and increase the variety of foliage. Vines, with trunks a foot in diameter, like huge serpents, seem to have sprung with one leap fifty feet into the air, and then grasped in their constrictor folds the forest giants, which under the pressure struggle almost hopelessly to retain their vitality.

But the great feature of these Everglades is exhibited in the countless variety of the feathered tribe. Myriads of cormorants constantly disturb the surface of the water. The scarlet ibis, the gayly-decked wood-duck, the beautiful mallard, the gigantic blue heron, the delicate song-bird, and imperial eagles, are constantly in sight, mingling their discordant voices and the shrill sounds of their whistling wings, suggesting a profuseness of animal life that rivals that of the vegetable world.

The deer, most favorably situated for supplying itself with food, and thoroughly protected from the deadly pursuit of man, grows larger than elsewhere on the continent, and, as a permitted monarch of the wastes, breaks through the tangled foliage which lines the banks of the inland lakes, and with the aquatic inhabitants enjoys the luxury of bathing in the pure water, a taste which the graceful animal seems to indulge even to excess.

The sun seems ever to shine with the intensest brilliancy. Oppressive, however, as may be the heat, the cool sea-breezes of the Mexican Gulf constantly temper the atmosphere, and produce a geniality of climate that can only be understood by realization. But, under the influence of this germinating heat, the rapid growth of the vegetation seems unbounded, and ever full of the vigor of youth. There is no evidence of decay anywhere. The frosts which make the Northern forests in the fall mottled with gay colors never garnish these Southern landscapes; all is one intense but ever-varying green.



A Glimpse of the Rocky Mountains.

COLORADO.

The mountains of Colorado—The city of Denver—Boulder Cañon—Mountain mining cities—Idaho Springs and Georgetown—The ascent of Gray's Peak—Monument Park and the Garden of the Gods—Colorado Springs and Pike's Peak—The natural parks and their characteristics.

No State in the Union is a richer treasury of great natural wonders, of scenery both picturesque and sublime, as well as of the more material wealth of gold and silver, than the interesting State of Colorado, which has of recent years been the cynosure of attention on the part of the mining world.

The State has on its north Wyoming Territory and Nebraska; on the east Nebraska and Kansas; on the south Indian Territory and New Mexico; and on the west Utah. Its area of nearly one hundred and five thousand square miles may be separated into three natural divisions: its mountain-range, including the natural

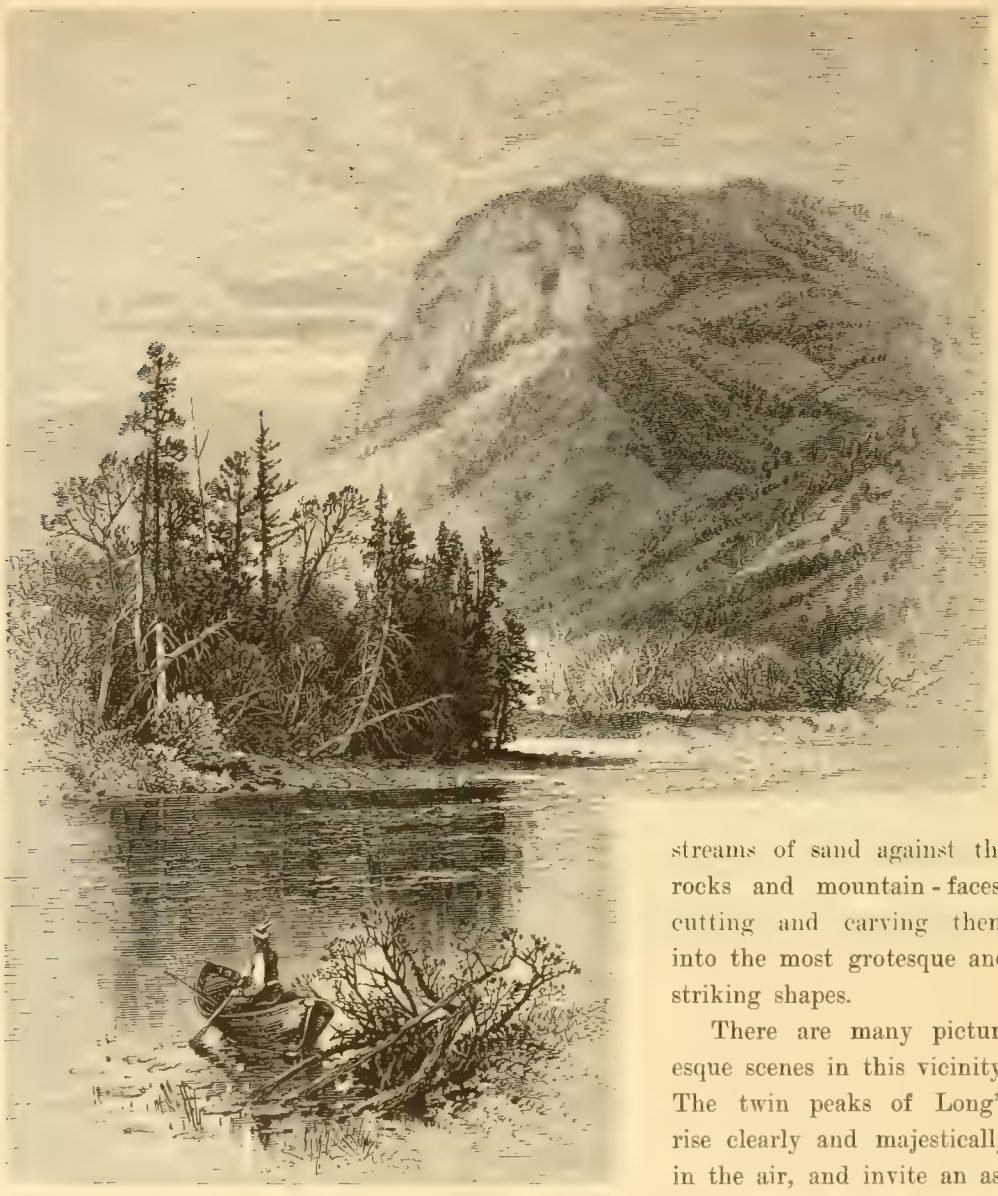
parks, its foot-hills, and the plains. It is, of course, in its mountains that the cardinal attraction of Colorado scenery, as well as of its industrial interests of gold and silver, lies. Without attempting to enter into any elaborate description of the extraordinary features of the whole State, it is our hope to present some vivid idea of the more characteristic phases of Colorado scenery.

Let us take the Denver Pacific Railway from Cheyenne, one of the stations on the Union Pacific road. Between Cheyenne and Pueblo, a town in Southern Colorado, two hundred and twenty miles distant, the Rocky Mountains reach their greatest height in their whole length from the Arctic Circle to Central America. From almost any peak hundreds of other peaks can be seen, all more than ten thousand and some fourteen thousand feet in height. The highest and best known are Long's, Gray's, and Pike's, the former being farthest north, and the latter farthest south. Of the view from Mount Lincoln, which is southwest from Cheyenne, a well-known geologist, Mr. Clarence King, writes:

"To the east, far distant, is distinctly seen Pike's Peak, with the continuous ranges which extend northward to Long's Peak. On the west and northwest is a vast group of high mountains, gashed down on every side with deep vertical gorges. To the southward can be seen the granite nucleus of a remarkable range of mountains, the Sawatch, which, with its lofty peaks, among them Mounts Yale and Harvard, looms up like a massive wall with a wilderness of conical peaks along its summit—more than fifty of them rising to an elevation of thirteen thousand feet and over, and more than two hundred rising to twelve thousand feet and over. Probably there is no other part of the world accessible to the traveling public where such a wilderness of lofty peaks can be seen within a single scope of vision."

A thrill of vivid delight passes through the mind as we gaze for the first time upon these famous mountains; but the dusty, arid plain tends to create a feeling of disgust which the rapture of the distant mountain vision can not entirely dispel. The main portion of the route of the railroad as far as Denver is through a plain with mountains on the western horizon. One of the towns on the route, Greeley, named after and planted under the auspices of the celebrated editor, is a flourishing little place on the Cache la Poudre River, and is distinguished from other similar Western towns by the fact that intoxicating drinks are not allowed to be sold; and the result is, that it has never been the rendezvous of those roughs and rowdies who have contributed to the disturbance of many a frontier town, and caused the Eastern man to fancy that he had dropped into a place freshly transplanted from the infernal regions. Not far from Greeley is Glen Doe, a beautiful valley, inclosed by high bluffs and dense woods of hemlock, fir, pine, and larch, which veil the hill-sides in their somber foliage, except where a mass of naked granite or basalt juts out with a storm-beaten and sand-sculptured face.

Most of our readers know something of the sand-blast machine, by which a stream of sand is poured against glass and made to emboss and cut it in any figure to suit the workmen. Just so the great wind-storms in different parts of the West carry



Glen Dee.

streams of sand against the rocks and mountain-faces, cutting and carving them into the most grotesque and striking shapes.

There are many picturesque scenes in this vicinity. The twin peaks of Long's rise clearly and majestically in the air, and invite an ascent which all the tourists who see the best of Colorado are disposed to make. This ascent is generally made from Estes Park, from which some lovely views of the mountain are obtained, excelled only by those near Lily Pond, a lake about a mile in diameter, with a surface like a mirror, and borders of profuse wild-flowers.

When we arrive at Denver we find a flourishing city standing in the open plain, thirteen miles from the Rocky Mountains, of which it commands a grand and beautiful view. Through the clear mountain air may be seen the imposing forms of Pike's

and Long's Peaks, and the snow-capped range extending for two hundred miles, its rich purple streaked with dazzling white, and here and there draped in soft, transparent haze. The city is handsomely built, and contains many imposing buildings and noble blocks. The five railways radiating from it afford access to all parts of the State, and the city is alive with energy and business enterprise. There are numerous hotels, many handsome commercial structures, fine churches and banks, several theatres, and large manufactories and breweries. At the United States Mint bullion is melted and assayed, and returned to depositors in the form of bars with the weight and fineness stamped on them. The population of this thriving city is nearly thirty-six thousand, and it is annually visited by great numbers of tourists, who make Denver their starting-point for trips to different parts of the State, for one traveling blindly from this center can hardly go amiss in his search for the beautiful and picturesque.



Long's Peak.

First let us visit the celebrated Boulder Cañons, one of the most interesting portions of Colorado. We leave Denver by the Colorado Central road, and, proceeding westward sixteen miles, reach the little town of Golden, situated between two picturesque hills and the North and South Table Mountains. We may readily conjecture from its name that it is the center of an extensive mining-region. Twenty-four miles farther of railway-travel on the same road in a northerly direction brings

us to the town of Boulder. A wagon-road leads up the cañon, which is a stupendous mountain-gorge seventeen miles long, with walls of solid rock in many places three thousand feet high. A brawling stream rushes down the center of the ravine, broken in its course by clumsy rocks and the fallen trunks of trees that have been wrenched from the sparse soil and moss in the crevices. This colossal ravine is divided into North, Middle, and South Boulder Cañons. In all of them are abrupt walls, diverging in some instances not more than a few feet in a thousand from a vertical line—walls of basalt and granite often richly colored, lifted from the narrow bed of a stream to awful heights, and sometimes split by cross-chasms, into which a ray of sunlight never by any chance creeps. Sometimes the cliffs overarch and form a tunnel, and again they widen into a pretty valley. At the juncture of the North and Middle Cañons a cascade pours its avalanche of water over a ledge sixty feet high, and hanging over the spot is an immense dome-shaped cliff of barren rock. This dome is a mighty column of crystallized granite, four hundred feet high, and it sparkles in the sunlight as if set with a million diamonds. On the eastern side you find a recess not unlike a piazza, which affords protection against the passing storm. Quaint and wonderful forms, worked out by the force of wind and water, startle your fancy with the oddest suggestions, for the likeness of almost every bird and beast, of temples, palaces, and churches, can easily be found in these gigantic carvings of Nature.

Located in these mountains are a number of mushroom mining-towns, full of interest not only on account of the industry which gives them excuse for being, but on account of the strange types of life you meet in them, ranging from the fierce ruffian, who goes armed, with the butt of a revolver sticking ominously out of each boot, and ready to shoot any one at sight who looks askant at him, to the most refined men and women. A string of village-cities are thus rooted in the mountain-sides, and their inhabitants burrow into the rocks with furious zeal for gold and silver. Central City, Black Hawk, Mountain, and Nevada, rise on successive planes of height, and present types of town life utterly strange to one only accustomed to the orderly and conventional ways of Eastern cities.

Returning again to Golden, we take the Central City Branch, which diverges from the main line of the Colorado Central and passes in a westerly direction up through Clear Creek Cañon, one of the most wild and picturesque localities on the continent. All the peculiar features of a gold-mining region are seen. Little water-courses, in board troughs, run upon stilts in various directions; all sorts of water-wheels, in every state of dilapidation, abound; and the hills on every side are broken with the mouths of tunnels and deserted shafts. Here and there the bottom of the ravine is choked up with mills, furnaces, and other buildings, which stand among the rocks, and are seemingly perched on impassable places. The history of one of these mines, says an entertaining writer, may be traced thus: The formation, or country rock, is a common gneiss, apparently of the Laurentian age; a vein or lode in it is found exhibiting "blossom-rock," a yellow, spongy mass, charged with iron-rust formed by the oxida-



Mouth of South Boulder Cañon.

tion of the pyrites. The discoverer stakes out his claim, and, if the "dirt pans well," the rest of the lode is soon taken up. At length the "top quartz" or blossom-rock

is worked out, and even iron mortar and pestle fail to pulverize sufficient of the now hard and refractory ore to pay the prospector for his trouble. Water, too, invades the mine and drives him out.

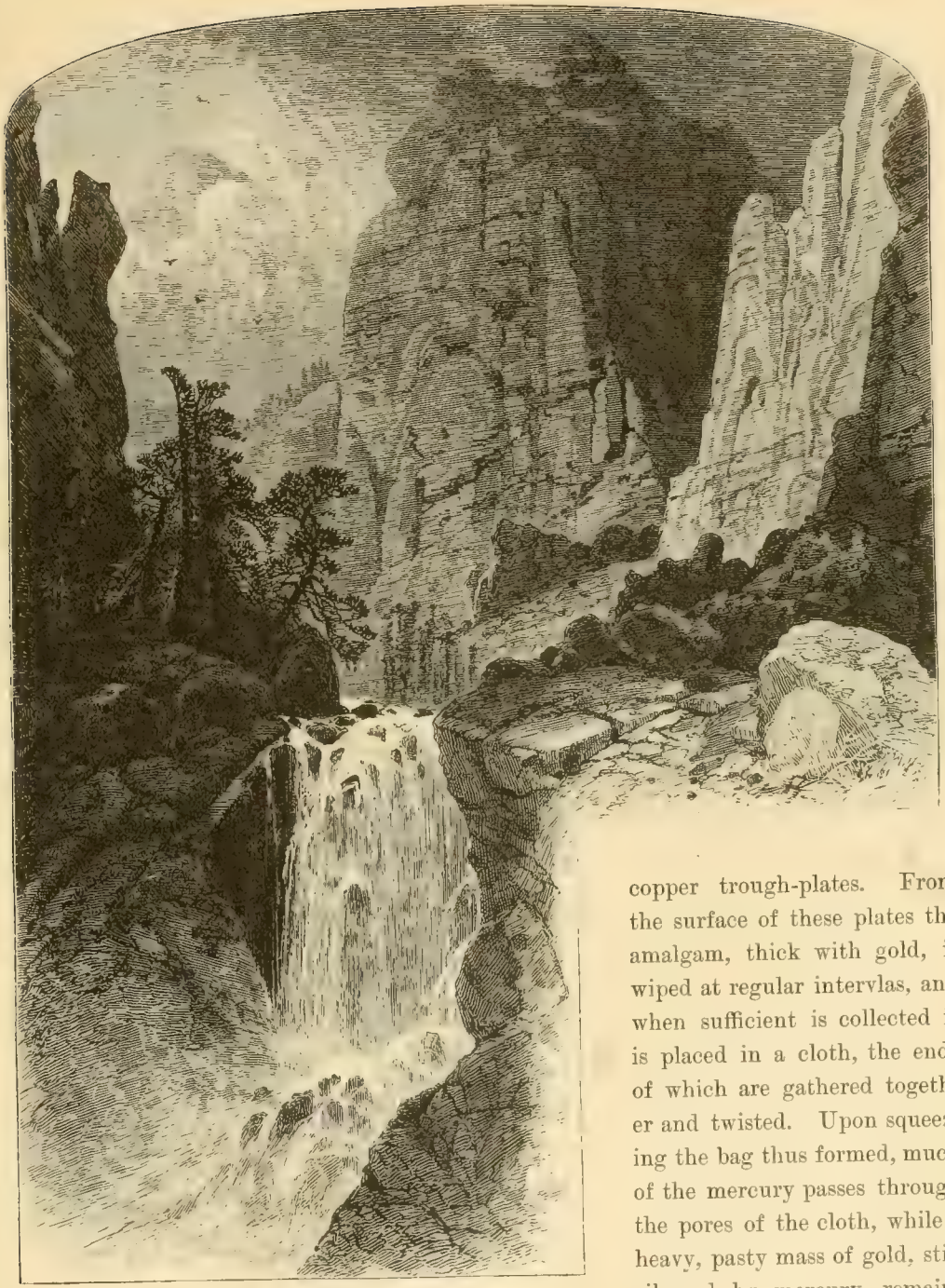
Now comes another phase: either the claim-owners effect a union—a mining company being formed—or the capitalist steps in and purchases. Lumber and machinery



Boulder River.

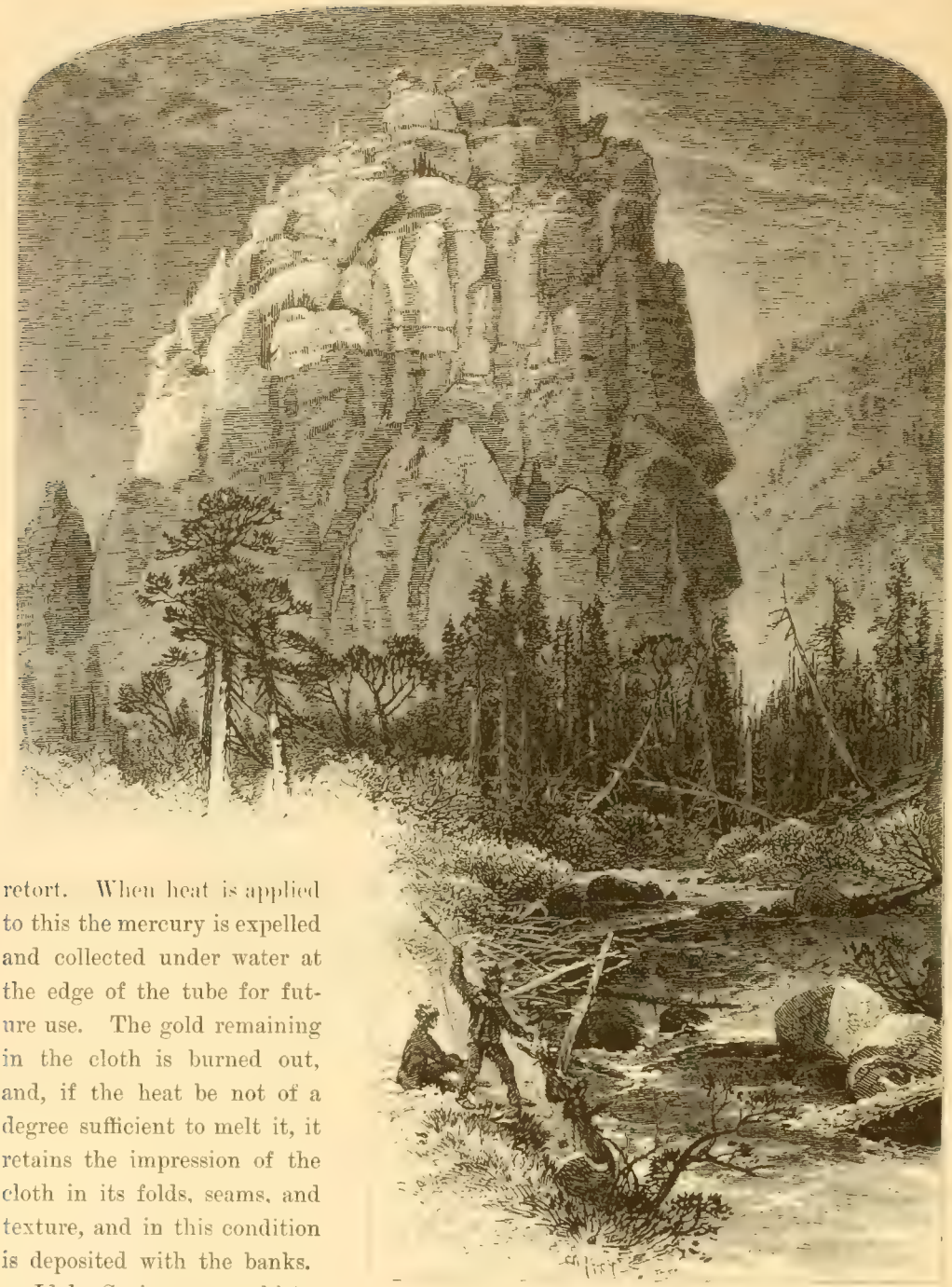
are then brought over the mountains: presently buildings appear, and true mining is begun. Shafts are sunk; levels, drains, and tunnels made out; and the ore is put through a "stamp-mill."

The product of the mill would not readily unite with pure mercury. It issues from beneath the heavy stamps in a grayish, sparkling, thin mud, and, flowing over gently inclined sheets of amalgamated copper, bright with quicksilver, passes off under the name of "tailings," leaving the gold-dust amalgamated and fixed to the wide



The Falls, North Boulder Cañon.

copper trough-plates. From the surface of these plates the amalgam, thick with gold, is wiped at regular intervlas, and when sufficient is collected it is placed in a cloth, the ends of which are gathered together and twisted. Upon squeezing the bag thus formed, much of the mercury passes through the pores of the cloth, while a heavy, pasty mass of gold, still silvered by mercury, remains within. This last, with the cloth holding it, is now placed in a cast-iron crucible, to which a flat iron top is fastened, a small, bent pipe passing out of the center and forming the neck of the



Dome Rock, Middle Boulder Cañon.

retort. When heat is applied to this the mercury is expelled and collected under water at the edge of the tube for future use. The gold remaining in the cloth is burned out, and, if the heat be not of a degree sufficient to melt it, it retains the impression of the cloth in its folds, seams, and texture, and in this condition is deposited with the banks.

Idaho Springs, some thirty-five miles from Denver, on the line of the Colorado Central Railway, is beautifully located, and is celebrated for its hot-soda springs, which will probably, by-and-by, make the place a famous resort. The

temperature of the springs ranges from 80° to 113° Fahr., and these vary only two or three degrees during the different seasons. A large swimming-bath gives opportunity for pleasant exercise and the absorption of the soda, lime, magnesia, and iron with which the waters are charged. You speedily find out that, if soda-water is good to drink, it is still more delightful to bathe in. As a mining locality Idaho has passed its glory, but, as a health resort, it is continually increasing in popularity, for these chemical springs are almost a specific in many diseases. The locality is surrounded by romantic scenery, embodying ravine, mountain, lake, and valley. A lofty ridge of peaks forms the southward picture, with the Old Chief, Squaw, and Papoose Mountains especially prominent. Sixteen miles away are the Chicago Lakes, in the neighborhood of which Bierstadt found the inspiration that expressed itself in one of his most popular works —"The Storm in the Rocky Mountains." They are the most picturesque sheets of water in Colorado, and are embosomed on the slopes of Mount Rosalie, at a height of eleven thousand nine hundred and ninety-five feet above the level of the sea, and twenty-two hundred feet below the summit of the peak. Georgetown and Idaho Springs are equidistant from them, and, though the trail by which they are approached is rough, they are visited by many tourists during the summer months.

Such Alpine lakes are a common feature of the Rocky range. Ten or twelve thousand feet above the sea-level, three or four thousand feet above the highest foot-hills, the mountaineer unexpectedly finds them glittering in marshy basins, fed by a hundred streamlets of freshly melted snows—at night crusted, even in midsummer, with a thin ice that yields as the day warms, and admits the vision into twelve or fifteen feet of dazzlingly pure, bluish water, with a bright-yellow bottom. The snow presses on the margin, and from this white and chilly bed a lovely variety of delicately formed flowers spring, whose colors are only rivaled by the splendors of the speckled trout which shoot through the sapphire depths.

As we ascend by the railway from Idaho to Georgetown the scenery becomes increasingly bold and striking. There are no abrupt rising peaks or glaciers, only huge mountains, grand masses, an endless sweeping sea of giant forms, that gather cloud and reflect sunshine, forming gloomy depths and radiant heights; broad parks, rushing streams, and mirror-like lakes, which reflect the azure and gold of the skies. We wind in and out along the stream, between huge rocks and mountain-piles, looking through suggestive vistas, and up rugged cañons, the mountains gathering closer and closer till we reach Georgetown.

This interesting town, lying in the lap of the mountains, is considerably more than eight thousand feet above the sea-level—loftier than even the Hospice of Mont St. Bernard—the most elevated town in the world. The mountains are steep and high, but have been stripped bare of their forests by fire, from which the town itself has suffered. You can still see traces of the havoc made by the wind where houses are blown over as if they were children's mimic structures of card-board, and whole squares made desolate. This will account for the singular way in which some of the houses, in exposed places, are anchored with iron ropes or braced by heavy timbers.

It is a strange, desultory place: you don't know when you are keeping the main street or investigating the mysteries of some one's back alley; houses endwise, crosswise, corner-wise, any way to meet the demands of strength and convenience. But Georgetown has many fine buildings as well as these crazy structures—schools, churches, newspaper-offices, hotels, banks, and fine private residences. Be it said, to the honor of the people, who are as orderly and exemplary as any found in New England, that they have made it as difficult to buy intoxicating liquors on Sunday as if the most stringent Maine law were in force.

The ore-veins are nearly perpendicular, sometimes with more than fifty feet between them, and ranging from what are called knife-blade seams to fifty feet in



Idaho Springs.

thickness, or more. A tunnel driven into the side of the mountain will therefore pass through seam after seam. When one of sufficient richness is reached, the miner at once records his claim, which is considered valid, and he is entitled to work seven hundred feet each way from the point where the tunnel enters. These veins can be detected, where they come to the surface, by what is called "blossom-rock," and the expert recognizes instantly the presence of the ore. When it is discovered that a vein is being worked through a tunnel which is claimed at the surface, a bargain is made by which the borer is allowed to work the claim on shares. Many of these claims are owned by companies, others by individuals, who in early times were wont

to back the ore to the mill in loads of from one to two hundred pounds. Often you will see a string of jacks, as the mules are called, winding along through the most inaccessible parts of the mountains, bringing down the crude ore, or returning loaded



Georgetown.

with picks, barrows, and other mining implements, or stores for the miner, whose shanty may be seen perched high up among the cliffs, with not even a potato-patch to while away his spare hours.

There are many romantic spots in the vicinity, deep gorges and ravines intersecting the mountains in every direction. Just above the city is the famous Devil's Gate, a deep chasm, cliff-walled, through which a branch of the Clear Creek foams and leaps. Green Lake is another attractive resort, two and a half miles distant. The water is so crystal clear that objects eighty feet below the surface may be distinctly seen, though the color is bright green. A dense growth of pines fringes the edges, and innumerable peaks cluster around, their snows sometimes seeming to be reclining by the lowering clouds that sweep over them.

From Georgetown the tourist finds a convenient approach for the ascent of Gray's Peak, the highest mountain of the range, its top being 14,251 feet above the sea-level. The road winds westward and upward out of the town until wide fields of snow are reached. This is in October; earlier in the season little snow is seen. The groves of aspen are left far below, and tall, majestic pines, gleaming silver-firs, and the slender, graceful Douglass spruces appear. An extensive upland valley opens to



Clear Creek, below Georgetown.

the mountaineers as the forest grows thinner and the trees smaller. To the left, sheer and rugged, rises Mount McClellan, and at the height of twelve thousand feet the Stevens Silver-Mine is passed. Now the timber-line is gained, and the forest ceases, reaching forward in short strips, like courageous, undaunted squads of infantry. How wonderful a war between natural forces—how obstinate the contest where they meet! The few daring trees that stand forth higher on the mountain than their fellows have been seized by some strong, invisible power and twisted and contorted almost to



Green Lake.

death. Their tops resemble dry and weather-beaten roots, and all their vitality is near the ground, where some branches creep out horizontally, groveling to obtain the growth and breadth denied to them above.

The valley finally closes in, and the twin peaks of Gray's impend—the nearer one dark, stern, and precipitous; the other still far off, soft in outline, and sloping easily down to a great bed of ice and snow—the hidden, shadow-loving remnant of a glacier.

Another half-hour of climbing brings the jaded explorers to a precipice, with deep drifts surrounding it. The soft new snow of unknown depth looks treacherously calm and beautiful, and where it meets the opposite mountain-wall has the aspect of a *névé* glacier, upholding fallen bowlders, and scored with a long drift of rock and gravel cast down from overhanging cliffs. The precipice itself descends six hundred feet or more, and is terribly dark and dizzy.

This passed, a long, steep slope of snow-clad rocks rises before the traveler, and a narrow trail, winding in short, precarious zigzags on its face, leads to the summit.

It now becomes necessary to leave the horses and go afoot. By-and-by, with the exercise of desperate exertions, the summit of the nearer peak is attained.

From the journal of one who made the ascent of Gray's Peak we take the following extract: "Who can describe adequately the wonders of that mountain-summit? They had told us we would see all the kingdoms of the earth spread before us, but moving cloud-curtains obscured that grand panorama of parks, mountains, plains, and far, far away over that billowy sea of stormy mountain-tops, the Wahsatch Range, and Salt Lake. These we had to take on faith, like the future glories; but how much had we here that was sublime! Deep, deep through that mysterious gloom came dim glimpses of the South Park—only a suggestion, the imagination had to furnish all the rest; here rippled from beneath us streams tributary to Platte River, and eventually finding the waters of the Gulf of Mexico; there the sources of Snake River, whose waters mingle at last with the Pacific. On one side black clouds swept down into an unfathomable gulf, making its crags resound with the noise of their thunders, while just beyond rose majestic snow-caps, radiant in the noonday sun. Towering heights, profound abysses, with snow and rain, thunder and lightning, cloud and sunshine, were the elements that made up this impressive scene, or rather series of scenes. Could we have had more? Would not the eye have wearied and the sense refused to grasp the magnitude of an unobstructed view? We were satisfied as it was, and now, cold and wet, retraced our steps down the mountain.

"B—— and I having started before the others, reached the bottom first, quite demoralized. Surely all our horses had been *lariated* together! there were only three remaining now—where were the others? not in sight, that was certain. We held a short council; we were wet and cold, it wouldn't do to sit there. It so happened that *our* horses were the remaining ones; the guide was with the others, so we determined to press on and perhaps overhaul the runaways. A couple of miles down the mountain, and in the edge of the timber, we found them quietly cropping the grass, with no disposition whatever to be caught. However, after a good chase, and a thorough warming in consequence, we succeeded in capturing the three vagrants, and dragged them reluctantly back up the mountain. The others had piled all the saddles and traps on the one remaining horse, and, it may be easily imagined, were a dejected-looking party in view of a walk of six miles farther to the nearest house, after human flesh had done all it was capable of doing. It may be also easily imagined that there was a shout of joy passed from one to another—wading as they were through the snow and wet—when we hove in sight. Be sure there was no time lost in adjusting saddles and bridles, and getting fairly started on our homeward way. The calculation was beautifully exact; the last atom of strength gave out as the last rod was accomplished. Too tired to eat, I sought relief in sleep, and got that only by virtue of a potent medicament which one of my fellow-sufferers dispensed to me. And so ended our trip to the highest peak in Colorado."

Returning again to Denver, let us proceed by the Denver and Rio Grande Railway to Colorado Springs, a town seventy-six miles from Denver directly south. Six miles



Gray's Peak.

from this point are Manitou Springs, whence several very fascinating excursions may be made to the Garden of the Gods, Glen Eyrie, Monument Park, Cheyenne Cañon, and to the summit of Pike's Peak.

Let us mount the coach-box with the driver of the stage and begin our journey to Manitou Springs. On the way we pass Colorado City, the oldest city in the State, founded by the gold-seekers of 1858, but which soon faded into insignificance before

the greater discoveries of mineral wealth in other places. Just before reaching Manitou we find ourselves apparently at the base of Pike's Peak, though the summit is still far off. Eastward we look on the arid plains, stretching out with unbroken monotony of form and color in the vague distance. Westward the settlement creeps up to the portals of Ute Pass, which with its frowning steeps of rock leads to the treasure-mines of the upper Arkansas and the Red San Juan.

Manitou Springs is as lively as an Eastern watering-place, and in the season has the usual round of summer-place gayeties. There are three handsome hotels to choose from, and several medicinal springs, with a temperature varying from 45° to 60°, in-



Snake River.

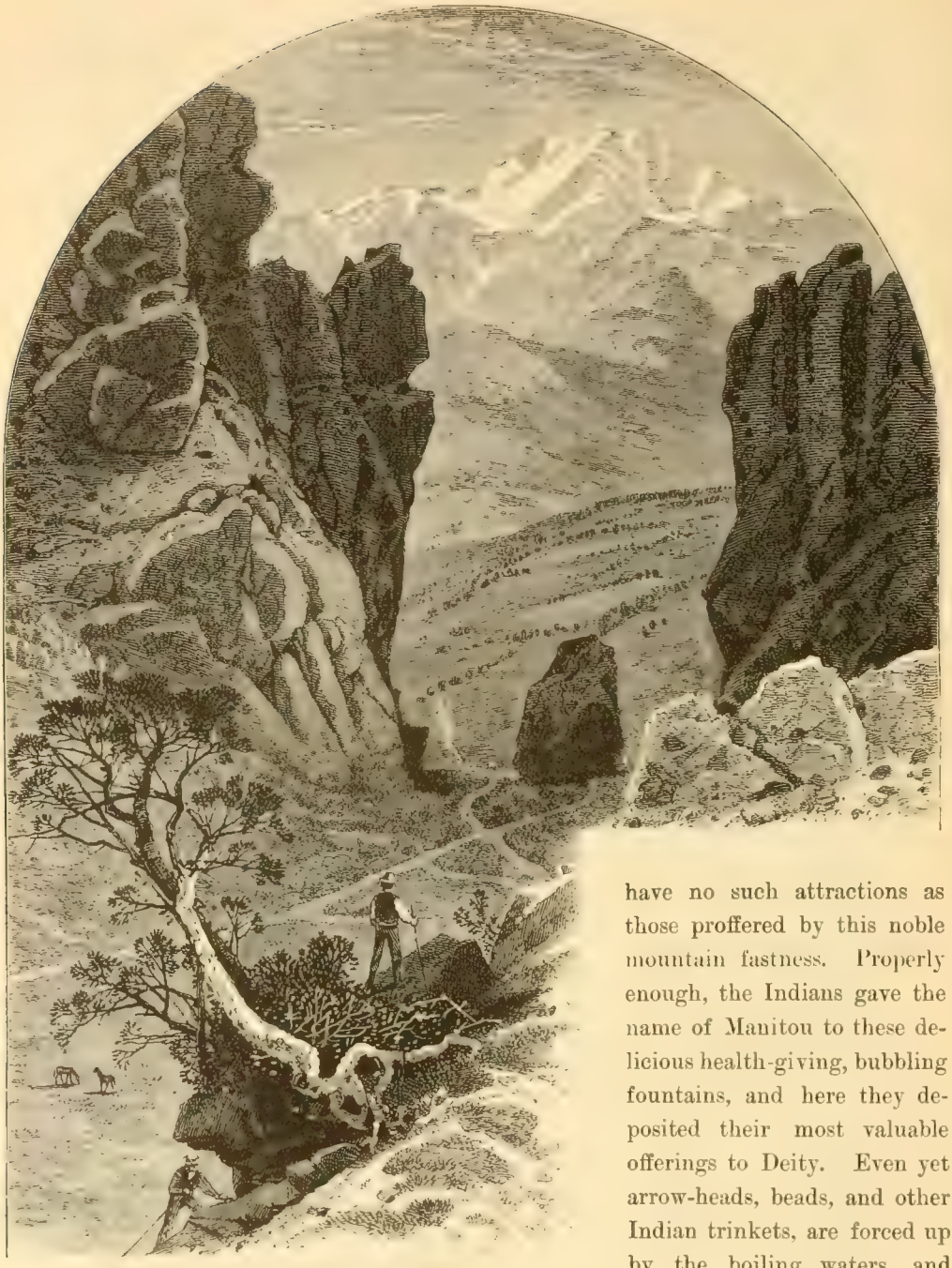
closed in tasteful pavilions and surrounded by pretty cottages. The first spring is close to the road, and the violent bubbling of the water seems to indicate a large supply, though there is hardly a gallon a minute. About a hundred yards above, on the right-hand side of the creek, is another and larger spring, which gushes out of the rock with great turbulence.

Sulphur, iron, soda, arsenic, and other health-giving ingredients, are cunningly compounded by Nature in these fountains, which boil and bubble up as if expelled from the earth by the tremendous weight and pressure of Pike's Peak. The shadow of this mountain monarch falls on them every day after four o'clock, and cool breezes,



Clear Creek Cañon.

as refreshing as the waters themselves, fan the cheek of the invalid, and paint the face of strength and beauty with a fresher color. Saratoga and Virginia watering-places



Pike's Peak, from the Garden of the Gods.

have no such attractions as those proffered by this noble mountain fastness. Properly enough, the Indians gave the name of Manitou to these delicious health-giving, bubbling fountains, and here they deposited their most valuable offerings to Deity. Even yet arrow-heads, beads, and other Indian trinkets, are forced up by the boiling waters, and found in the stream below.

The neighborhood of Manitou is exceedingly interesting, and comprehends all varieties of scenery. A day's excursion allows the tourist time for the ascent of Pike's Peak, on the topmost pinnacle of which he may stand, and let his heart fill

with the emotion that the majestic outlook is sure to inspire: on the silent billows of the plains, and the chaotic, gashed, and knife-like peaks, before whose feet these endless yellow waves have ceased to beat, like an eager living creature struck with despair. The sky itself seems to be attained, as ascending the trail on the mountain-side we glance through a clearing in the timber on the gorges far below. The pines and firs sway to and fro tempestuously with the roar of a great water-fall. The frail human body quivers and labors as the thin, crisp air strains the exhausted lungs. But what struggle, what hazard, what cost, is not repaid when the path makes its last curve, and leads to one of the grandest summits in all the Rocky range! Here on the very top we find a station of the Weather Signal Bureau, which is occupied summer and winter.

The surveyors have shown us that the elevation of Pike's Peak is not so great as that of Gray's or Long's, but it seems to be higher, as it stands out alone and sweeps upward from the foot-hills to a crystalline pinnacle, 14,147 feet above the level of the sea. It is visible miles and miles away over the plains. The immigrants of old saw it long before its companions appeared above the horizon, and they gathered fresh courage as the blazing sun lit its tempest-torn granite into a pillar of gold. As far north as Cheyenne, and as far south as Trinidad, on the borders of New Mexico, it can still be seen, its boldness subdued in the gray of the distance; and, as we glance at it through lapses in the hills at its base, from the windows of the car, we seem to be under its very shadow, when it is in reality thirty or forty miles off.

A few miles from Manitou is Cheyenne Cañon, lying gloomily in the heart of the mountains, with many wonders to attract the tourist; and also within easy distance is William's Cañon, in which solid masses of rock have yielded to the action of the elements until they have been hollowed and broken into a vivid resemblance of some ruinous old castle. Bear Creek, rushing from the region of summer snows; and Ute Pass, locked between its walls of red granite—neither of these, nor the Garden of the Gods, nor Glen Eyrie, nor the Rainbow Falls, should be neglected by the traveler. A little way from the entrance to the pass, and about three quarters of a mile from the village, the creek breaks into a white rage as it shoots over a precipice of sixty feet in a foaming avalanche to which has been given the name of Rainbow Falls.

Monument Park is famous for its strangely carved sandstones. There are many parts of the Rocky Mountain country, from the Yellowstone in the far north to Tierra Amarilla in New Mexico, which strike us as being the creation and abode of some fanciful race of goblins, who have twisted everything, from a shaft of rock to an old pine-tree, into a whimsical and incredible shapelessness. The sand- and water-worn rocks impress us as the result of a disordered dream—the strange handiwork of a crack-brained mason, with a remembrance of Caliban's island lingering in his head. Those in Monument Park are ranged in two rows lengthwise through an elliptical basin. They are cones from twelve to twenty-five feet in height, and may be said to resemble mushrooms at the first glance, though an imaginative person will soon find himself transfiguring them into odd-looking men and animals. Think of several

sugar-loaves, with plates or trays balanced on their peaks, or of candle-extinguishers with pennies on top, and you will obtain an idea of what these rock-curiosities are. Each pillar is capped with a mixture of sand and pebbles cemented by iron, and this



Monument Park.

being so much harder than the underlying yellow sandstone, has resisted the wasting influences of wind and rain, and in some cases extends continuously over several pillars, thus forming a natural row of columns.

But of all the wonders of this region the Garden of the Gods is specially worthy of description. Running from east to west, almost at the base of the great mountain-range, on the eastern side stone palisades rise upward from the valley. These walls are red, white, and gray. Their thickness varies from one hundred to five hundred feet, and their height from five hundred upward. Beyond this majestic wall, and within a mile of it, the mountain-range makes another impassable barrier. Between this lofty palisade and the abrupt mountain-sides is the famous "Garden of the Gods."

Through this great palisade are gate-ways several miles apart, the eastern of which is very narrow. The area of this first garden between the palisades and the cliffs is narrow, but the very wildness of the place, with its deep chasms and lofty sides and great stones of every hue and shape, amazes the beholder. The deep, narrow dell is completely walled in, and the little gate-way seems to have been designed by Nature as a sluice-way for the mountain-torrents to pour through. A bright, sparkling stream ripples perpetually from the second and larger garden, which is also full of wonders. There are towering crags and lofty stones set up on end, some inclined, like the leaning tower of Pisa, others erect as Bunker Hill Monument, all rising to dizzy heights, and each having its own peculiar color. Eagles' nests are visible along the summit and within the palisades, and there is a plateau covered with bright undergrowth of flowering shrubs and vines. Through a deep, narrow gorge flows a brawling brook, and along its narrow bed we ride beneath overhanging cliffs, till weary of wonders and staring at amazing precipices and great rock-walls shutting out the sky.



Tower of Babel, Garden of the Gods.

To the broader garden one finds access through a double gate-way, which is called the Beautiful Gate. This passage-way is through two high precipitous cliffs, with a large detached rock tower standing in the middle and thus dividing it in two. The stone fence on either hand is the solid palisade of red sandstone. It is sadly weather-worn. Great fissures are visible from the gate-way, and stone pickets a hundred feet long have fallen to the plain. The width of the inclosure is not more than one mile, while the stone-wall extends westwardly far into the mountains. Among the more striking rock-forms in the Garden of the Gods is the Tower of Babel; and a short distance away, in Glen Eyrie, may be seen equally notable fantasies, one of which is called the Organ, from its resemblance to a church-organ, and another the Major Domo, a curious and rugged pillar rising to the height of one hundred and twenty feet, though not more than

ten feet in diameter at the base. Glancing through the openings in the cliffs, you get a fine view of Pike's Peak in all its hoary splendor.

The longer one remains in Colorado the more he wonders at the marvels so thickly strewed around him. The first impressions are not pleasant, as he finds dust, painfully brilliant sunshine, scarce vegetation, and bleakness. But the oddness and sublimity of the scenery, so different from any found elsewhere in the world, repay him for all other annoyances. Five thousand tourists not unseldom visit Manitou Springs and the Garden of the Gods in the course of a single season, and thence drift off to see the other wonders of the State.



Major Domo, Glen Eyrie.

Cheyenne Cañon, five miles from Colorado Springs, is a sequestered mountain-gorge in which are many striking rock-formations and picturesque cascades. A tortuous trail leads from the mouth of the cañon three miles above to the first fall, which is thirty feet high, and extremely fine. From the ledge above the fall there is a succession of falls, six in all, rising above one another at regular intervals, the remotest and highest being several miles distant. Another interesting spot within an easy distance is William's Cañon, in which solid masses of rock have yielded to the action of the elements until they have been hollowed out and molded into a vivid resemblance of some ruinous old castle.

The Denver and Rio Grande Railway, which comprises more than twenty branches, penetrates into nearly every portion of Western and Southwestern Colorado, and passes through the remarkable silver-mining region, which has produced a greater excitement than any since the Comstock lode, in Nevada, was in the height of its prosperity. The heart of this great Colorado mining region is the town of Leadville, now a city of fifteen thousand people and more, where, in 1878, there were only a few tents and log-houses. Leadville is one of the most interesting mining-camps, perhaps, in the

world, and well worthy the visit of the tourist alert to observe the curious phases of nature and society. From Pueblo, the Leadville division of the Rio Grande Railroad runs nearly northwesterly to Cañon City, near which Professor Marsh discovered some of the most remarkable fossils of gigantic extinct animals ever offered to the investigation of science. Two miles beyond Cañon City the road enters the Grand Cañon of the Arkansas, where the river has cut its way for eight miles through mountain-walls of solid granite, which in some places are three thousand feet in perpendicular height. The scenery at what is known as the Royal Gorge is of the greatest majesty, and here the iron track runs for several hundred feet on steel girders passing from wall to wall of the chasm, the ends being mortised into the solid rock.

Leadville, which is two hundred and seventy-nine miles by rail from Denver, and nearly southwest in direction, already presents many of the characteristics of a place of permanent prosperity. Situated in a valley where the slopes of several surrounding hills come together, many of the temporary wooden buildings characteristic of primitive places, uncertain of a future, have given way to substantial brick blocks, and other similar improvements have been made. The mines, many of which have yielded almost fabulous returns, are on the hills surrounding the town. It is believed by many geologists now that the richest body of silver-ore, which is of the kind known as carbonate, and is very easily mined and smelted, lies immediately under the city of Leadville. If this is true, it will make the place permanently a great mining city. The counties adjoining Lake, in which Leadville is located, are also very fruitful in silver deposits. What is known as the Gunnison country, a county immediately south and west of Lake, and one of the largest in Colorado, has discovered silver-fields of great wealth. It is believed, however, that the richest mineral deposits in the region are on the Indian reservation in the northwestern part of the county. The determination of prospectors to intrude on the reservation has already caused serious trouble with the Indians, and Congress has agitated the question of removing the savages, in obedience to the urgent call of the Colorado mining community—a step which, if taken, may easily lead to another Indian war.

Lovers of the picturesque traveling in Colorado will find themselves well repaid by taking a journey over the San Juan division of the Denver and Rio Grande Railway. At the distance of eighty miles southwest of Pueblo the track crosses the Sangre de Cristo range by the La Veta Pass, one of the most remarkable gorges in the Rocky Mountains, at a height of 9,486 feet, amid scenery of great beauty and grandeur. The Mule-shoe Curve and the passage around the point of Dump Mountain are regarded as among the most striking feats of railway engineering ever attempted. After passing the gorge, the traveler is whirled for seventy miles across San Luis Park, and the scenery continues to be marked by the most impressive beauty and picturesqueness. At first the principal objects in the background are Sierra Blanca, which is 14,564 feet high, and the serrated peaks of the Sangre de Cristo Mountains. On reaching the western wall of the park—the San Juan Mountains—the scenery increases in grandeur. It reaches its culmination at the Los Pinos Cañon and the Totter Gorge, which are

justly regarded as ranking among the most wonderful scenic attractions of Colorado. For a distance of eight miles the railway passes just below the brow of a precipitous mountain-range, at the giddy height of twelve hundred feet above the stream, following the irregular contour of the mountains through deep cuts and over high hills, past weirdly monumental rocks and under lofty cliffs. At Phantom Curve the road comes to the end of a mountain-wall that juts into the cañon, narrowing it to a mere



William's Cañon.

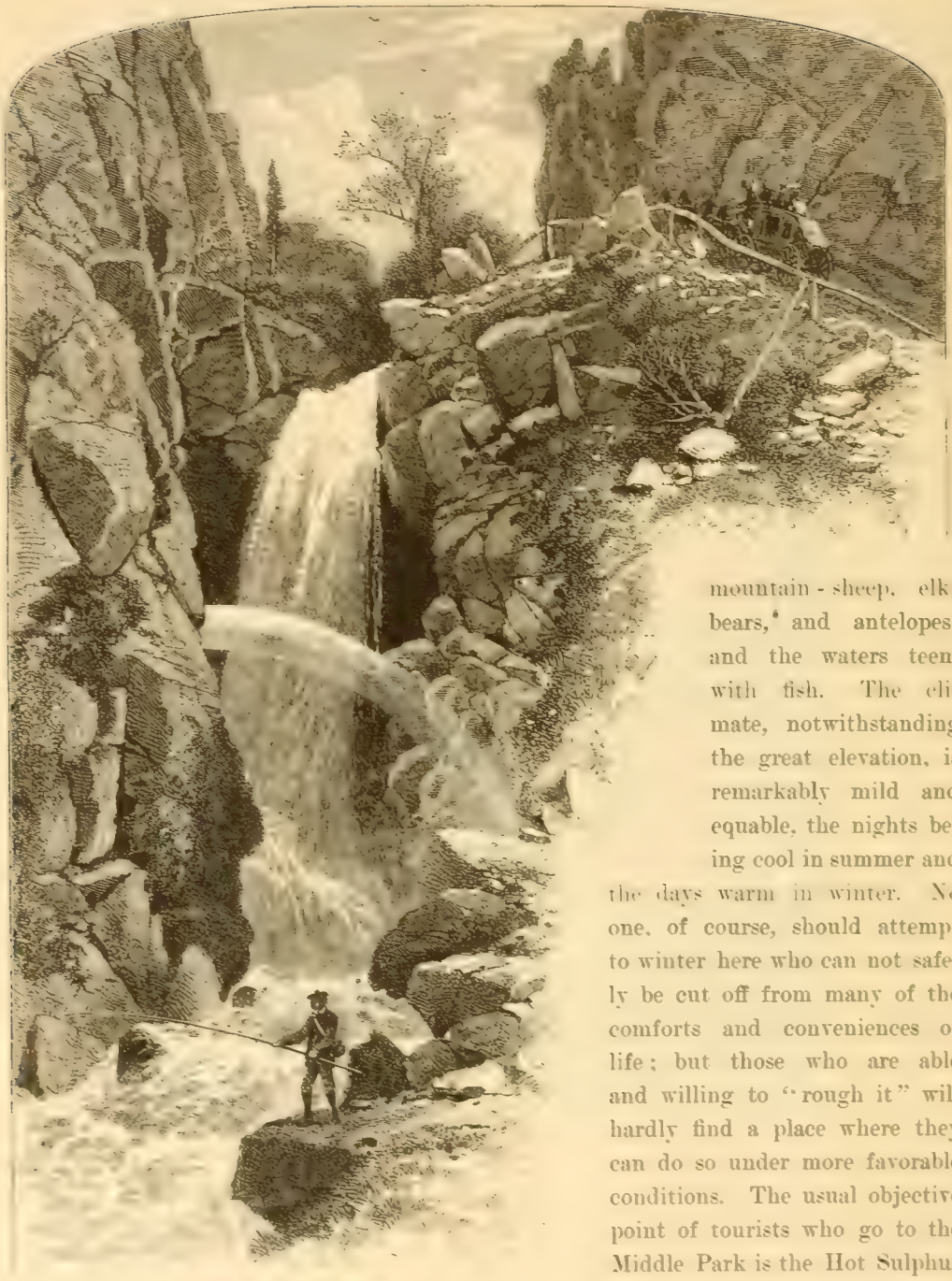
cleft or gorge fourteen hundred feet high, with the wall on the farther side rising above to an altitude of twenty-one hundred feet. A few rods from the gorge, at a point where the passenger looks down on the white foam of the stream eleven hundred feet below, the railroad enters a tunnel, which pierces the solid granite cliff for a distance of six hundred feet. On emerging from the tunnel, the track passes over trestle-work overlooking the precipice that extends to the bottom of the gorge—a ter-

rible abyss, which few have the nerve to look down on. All along this aërial journey an extended landscape of mountain and valley adds to the grandeur of the view. The terminus of this division of the Denver and Rio Grande road is Durango, one of the principal centers of the celebrated San Juan mining region. To the archæologist, the interest of a journey through the San Juan country is increased by the fact that here are the wonderful prehistoric cliff-dwellings on the Rio Mancos, which have long excited great interest and curiosity; and also eight ancient *pueblos*, inhabited by the Pueblo Indians, whom the Spaniards found here only forty-eight years after the discovery of America.

One of the most interesting features of Colorado scenery is found in its great natural parks. Of these there are four—North, Middle, South, and San Luis Parks. This extraordinary park system consists of extensive irregular plateaus or basins, shut in on all sides by lofty mountain-ranges. The surface is diversified by numerous hills, or ridges, and valleys, containing streams which form the headquarters of all the great rivers that flow out of Colorado. The valleys are covered with luxuriant grasses and flowering plants of various kinds, and possess an extremely fertile soil. The hills are covered with dense forests of pine, abounding in game, such as the bear, elk, and deer, and contribute extraordinary attractions for the sportsman and adventurer. The beds of the streams furnish many varieties of minerals and fossils, and afford a remarkable field for the lovers of science. Mineral springs, with waters possessing rare medicinal properties, are numerous, while coal and salt beds underlie the whole surface. The four great parks (for there are lesser parks of a similar character scattered through the western portion of the State) are in the central part of Colorado, and occupy a belt about seventy miles wide.

North Park has an area of about twenty-five hundred square miles, and possesses an average elevation of nearly nine thousand feet above the sea-level. Owing to its remoteness and colder climate, it has been less visited by tourists and sportsmen, but, since the recent discoveries of gold and silver, it has begun to be the goal of a stream of prospectors and settlers. To reach this part of Colorado one has to leave the Colorado Central Railway at Fort Collins, and take a stage-ride of about a hundred miles in a northwesterly direction, though a favorite method of tourists has been to travel on horseback with a camp-equipage packed on mules or in baggage-wagons.

Middle Park lies directly south of North Park, from which it is separated by one of the cross-chains of the great mountain labyrinth. The continental divide sweeps around on its east side, and majestic mountains encircle it on all sides, among which Long's Peak, Gray's Peak, and Mount Lincoln, from thirteen thousand to fourteen thousand five hundred feet high, stand as the most prominent sentinels. This park has an area of about three thousand square miles, and is elevated seven thousand five hundred feet above the sea. It is drained by the Blue River and the head-waters of the Grand River, flowing westward to the Colorado. The portions of the park not covered by forest expand into broad, open meadows, the grasses of which are interspersed with wild-flowers of every hue. There is game in abundance, including deer,



mountain-sheep, elk, bears, and antelopes, and the waters teem with fish. The climate, notwithstanding the great elevation, is remarkably mild and equable, the nights being cool in summer and the days warm in winter. No one, of course, should attempt to winter here who can not safely be cut off from many of the comforts and conveniences of life; but those who are able and willing to "rough it" will hardly find a place where they can do so under more favorable conditions. The usual objective point of tourists who go to the Middle Park is the Hot Sulphur Springs, which may be reached from Georgetown by the Berthoud Pass (forty-five miles); from Central City by the James's Peak trail (sixty miles); and from South Boulder. The Colorado Company's fine stages leave the Bar-

ton House, Georgetown, every other day for the Springs. A pleasant way of making the journey is on horseback *via* the first-mentioned route. The springs are situated on a tributary of Grand River, about twelve miles from the south boundary of the park. The waters are used chiefly in the form of baths, and have been found highly beneficial in cases of rheumatism, neuralgia, chronic diseases of the skin, and general debility. The accommodations for invalids are not first-rate as yet, but sufficient, perhaps, for those who ought to venture upon the journey thither over the mountains. A small town is gradually growing up in the vicinity. One of the pleasantest excursions in Middle Park is up the valley, twenty-seven miles from the Springs, by a good road to Grand Lake, the source of the main fork of Grand River. The lake nestles close to the base of the mountains, precipitous cliffs hang frowning over its waters on three sides, tall pines come almost down to the white sand-beach, and its translucent depths are thronged with trout and other fish.

South Park, the best known and most beautiful of all the parks, lies next below Middle Park, from which it is separated by a branch of the Park range. It is sixty miles long and thirty wide, with an area of about twenty-two hundred square miles, and, like the Middle Park, is surrounded on all sides by gigantic ranges of mountains, whose culminating crests tower above the region of perpetual snow. The highest elevation of the park above the sea is ten thousand feet, while the average elevation is about nine thousand feet, and nearly all the land which it contains is well adapted to agriculture. The streams, which are supplied by melting snows from the surrounding mountains, are tributaries of the South Platte, and flow east through the park to the plains. The climate of the South Park is milder than that of either North or Middle Park, and its greater accessibility gives it peculiar advantages for such tourists and invalids as can not endure much fatigue. Fairplay is the chief town of the region, and a good center for excursions. The park is traversed from north to south by a branch line of the Union Pacific road. The scenery is of the greatest grandeur and beauty, especially at the cañon of the Platte and Kawsha summit. From Fairplay, one of the stations on the railroad, there is easy access to Mount Lincoln, the ascent to the top of which may be made in carriages, as it presents no special difficulties. Mount Lincoln is one of the highest of the Colorado peaks, being 14,296 feet in elevation, and from the summit, we are told by Professor Whitney, there is a view unequaled by any in Switzerland for its reach or the magnificence of the heights included in its horizon. The direct road to the great mining center of Leadville from Denver passes through South Park.

The largest of the parks (for it includes an area equal to that of the other three combined) is San Luis. It is about twice the size of the State of New Hampshire, and contains eighteen thousand square miles. It is separated from South Park, of which it lies directly south by the main range which forms its north and east boundary, while on its west is the Sierra San Juan. From the encircling snow-crests thirty-five streams pour their waters through the park, nineteen of them flowing into San Luis Lake, a beautiful sheet of water near the center of the inclosure, while the others

discharge their volume into the Rio del Norte in its course to the Gulf of Mexico. On the flanks of the mountains dense forests of pine, spruce, hemlock, fir, aspen, oak, cedar, and piñon alternate with broad natural meadows, producing a luxurious growth of nutritious grasses, upon which cattle subsist throughout the year without any other food, and requiring no shelter. The highest elevation in the park does not exceed seven thousand feet above the sea, and this, together with its southern and sheltered location, gives it a wonderfully mild, genial, and equable climate. Warm mineral springs abound here as in other parts of the State, and are becoming widely noted for their valuable medicinal properties.



The Snow-clad Peaks of the Rocky Mountains.

THE YOSEMITE.

Approaches to the Yosemite Valley—How it was discovered—The big trees of Mariposa—Descent into the valley by the Mariposa trail—The Bridal Veil Fall and Cathedral Rocks—Sentinel Rock and Dome—Yosemite Falls—The inhabitants of the valley—The gorge of the Merced—Tenaya Cañon—View from Cloud's Rest—Accommodation for visitors.



Half Dome, from the Merced River.

THE Yosemite Valley, which is one of the great natural wonders of the United States, lies among the Sierra Nevadas of California, nearly in the center of the State, north and south, and midway between the east and west bases of the mountains, which at this point are about seventy miles wide. In a direct line the Yosemite Valley is one hundred and fifty miles due east of San Francisco, but the actual circuit of travel is a hundred miles more. It is in the southern portion of Mariposa County, and through it runs the Merced Riv-

er. The gorge is about eight miles in length, from half a mile to a mile in width, and is inclosed in frowning granite walls, rising in unbroken and almost perpendicular faces to the dizzy height of from two thousand to five thousand feet above the green and quiet vale beneath. Travelers from the East visiting the Yosemite usually go on to San Francisco, and make their start for the valley from that city, although they have to return again on the Central Pacific Railroad to one of three stations whence stage routes conduct to the valley. The favorite route is by the Visalia branch of the Central Pacific, which diverges from the main line at Lathrop to Madera. From the latter place there are ninety miles of staging to the valley, and the route is popular, as it affords an opportunity to see *en route* the Mariposa grove of big trees, which is part of the Yosemite grant made by Congress. The second route is by stage from Merced, on the Visalia branch, which gives the tourist the chance to see the Tuolumne grove of big trees. A third is also to Merced, whence a stage route connects with the Mariposa route at Clark's, and carries the traveler into the Yosemite Valley by Inspiration Point. The fourth is from Stockton, on the Central Pacific, by the Stockton and Copperopolis road to Milton, and thence by stage, which gives one an opportunity to view the Calaveras grove of big trees.

The name "Yosemite" was given to this valley in the belief that it was the Indian name for grizzly bear. The valley was first discovered in the spring of 1851. As early as the spring of 1850, the whites, living about Mariposa and mining on the streams that head in the vicinity of the Yosemite, after considerable trouble with the Indians living thereabouts, organized a military company to drive them out of the country. It was soon found that they had some sort of a stronghold away up among the mountains, and to this they invariably retreated when hard pressed. The character of the place was unknown, but soon wild stories were told of an impregnable mountain fastness, exciting the curiosity of the settlers; so that, in the spring of 1851, an expedition was organized, under the command of Captain Boling, to find the place and disperse the naughty aborigines. Led by a friendly old Indian, the party reached the valley, surprised the hiding braves, and drove them out. This was the first visit by white men to the Yosemite. Next year there was more trouble with the Indians, and a second expedition went out, again driving the offenders before them. They took refuge with the Monos, a powerful tribe among the mountains, quarreled with them, and by them were almost entirely exterminated, so that now, it is said, but few of the Yosemites are alive.

Although wonderful stories were told by those who returned, it was not until four years later (1855) that Mr. J. M. Hutchings gathered a party and made the first regular tourist's visit to the valley. A second party went in the same season, and next year a trail was completed on the Mariposa side, and the regular pleasure travel commenced. The same year (1856) the first house or shanty was put up, on the site of what is now known as Black's Hotel.

In June, 1864, Congress granted to the State of California, in trust, the Yosemite Valley and the Mariposa grove of "Big Trees," upon condition that the territory thus



Descent into the Valley.

designated should be set apart "for public use, resort, and recreation." California accepted the trust, appointed commissioners, and hence this magnificent valley, which, without extravagance, we may pronounce one of the world's wonders, is preserved secure in all its beauty and grandeur for public uses.

The principal features of the Yosemite Valley, and those by which it is distinguished from all other known valleys, according to Professor J. D. Whitney, are: the near approach to verticality of its walls; their great height, not only absolutely, but as compared with the width of the valley; and the very small amount of *débris* scattered on the main floor of the valley. These are the great characteristics of the Yosemite region throughout its whole length; but besides these there are many other striking peculiarities and features, both of sublimity and beauty, which can hardly be surpassed, if they are equaled, by those of any other valley in the world. Either the domes or the waterfalls of the Yosemite, or any single one of them even, would be sufficient, in any European country, to attract travelers from far and wide in all directions. Waterfalls in the vicinity of the Yosemite, surpassing in beauty many of the best known and most visited in Europe, are actually left entirely unnoticed by travelers, because there are so many other objects of interest to be visited that it is impossible to find time for them all.

The valley contains eleven hundred and forty-one acres of level bottom; and of these, seven hundred and forty-five acres are meadow, the rest being covered with trees and rock. From Tenaya Cañon, at the upper end of the valley, to Bridal Veil Fall, at the lower end, four and a half miles in a direct line, the decline is only thirty-five feet. Naturally enough, so level a surface is greatly overflowed during the spring freshets. The scant, coarse grass of the meadows gives in the perspective an impression of the richest green, gemmed with a profusion of brilliant flowers. Through these meadows winds the Merced River, during the summer an orderly stream, averaging about eighty feet in width, but in the early spring it is transformed into a furious torrent. The banks are fringed with alders, willow, poplar, cottonwood, and evergreens; upon the meadow level are grouped, in groves of greater or less size and density, pines, cedars, and oaks. From every point of view in the valley one of the most striking effects is in the richly variegated color of the mountain walls. The principal hue is a light gray, reflecting brilliantly white in the sunlight, occasionally varied with veins of a deeper, brighter hue. In many places stripes of red, brown, and black are produced by the flowing down of water carrying organic matter. The walls are of granite, with an average height of about three thousand feet; in some places nearly vertical, and with very little *débris* at the base; in others, a pine-covered slope leads up to gigantic towers, spires, or sharp-cut peaks. There are no fewer than five trails over which a beast of burden may climb in or out of the valley; and a man, sure-footed, cool-headed, and strong, may find a dozen places where he could, without real danger, scale those seemingly impassable barriers.

It is difficult to find comparisons to give an impression of the grandeur of the scenery, or of the lofty precipices surrounding the valley. If the reader crosses the



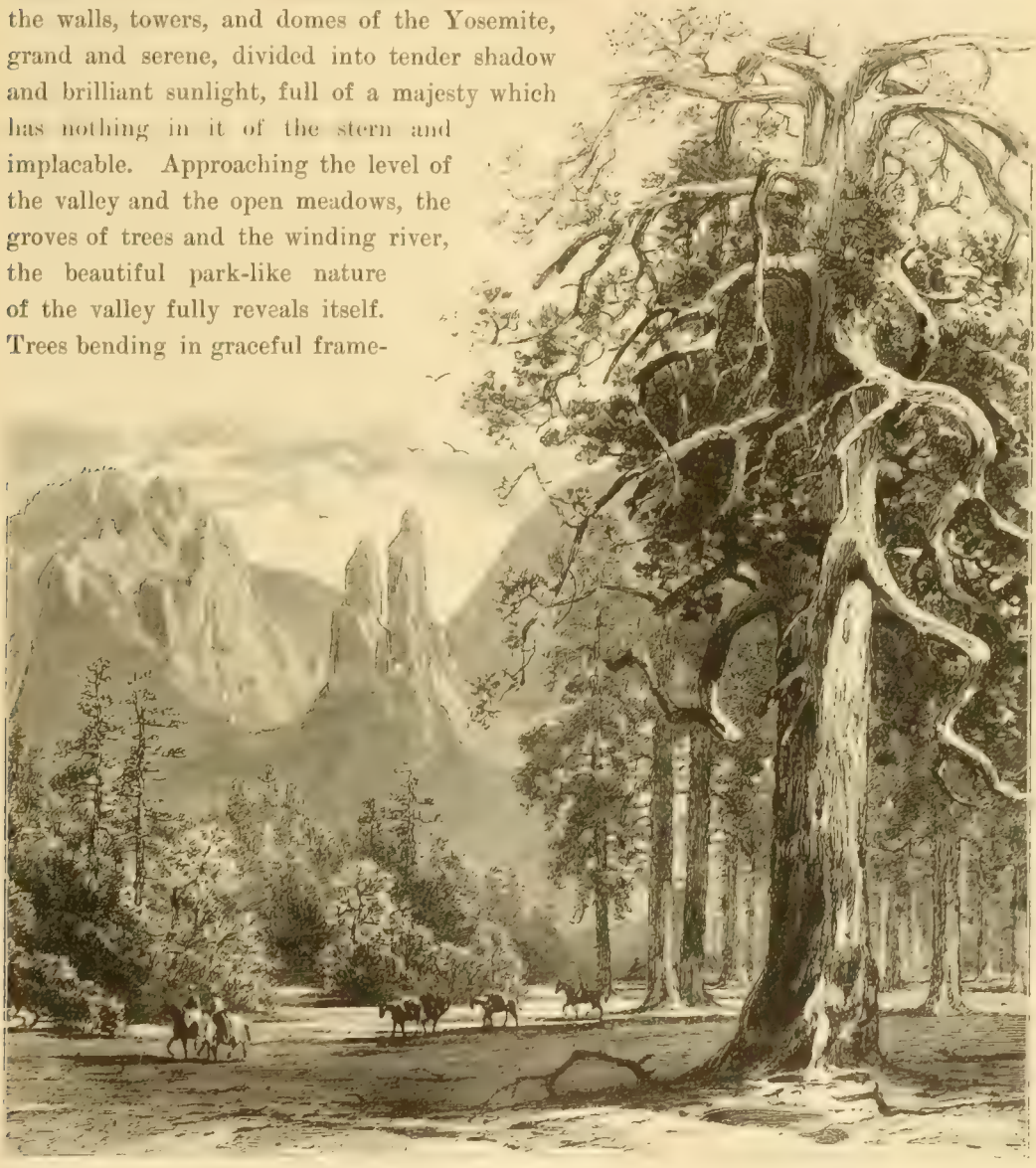
Yosemite, from Mariposa Trail.

continent on the Pacific Railroad, let him imagine, when on the loftiest mountain-pass, that it be cleft in twain to the level of the sea, and from the base he can look up four thousand feet to the summit of El Capitan, or six thousand feet to the glistening crown of the South Dome. If from New England, let him reflect that its loftiest peak—Mount Washington—raises its head only to the height of one of these giant rocks. The beauty of this grand scenery can not be easily conveyed in words.

The great gorge is not the only object that calls the visitor to this section. The vegetable productions are in keeping with the majestic rocks and giddy waterfalls. Surrounding it, at distances of from ten to fifty miles, are numerous groves of the great trees which have so astonished the world. These have been principally examined by Whitney and his corps of geologists, and their number is unknown. Those of Calaveras are more accessible and better known, but, large as they are, many are found in the southern groves exceeding them in size. Whitney measured one of one hundred and six feet in circumference and two hundred and seventy-six feet high. Another, lying prostrate, has been burned so hollow that one can ride on horseback in the cavity for a distance of seventy-six feet, and have ample room to turn around. The big trees of this section are not in a single grove, as in Calaveras County, but are scattered through an extensive region at an elevation of from six to seven thousand feet above the sea. The collection known as Mariposa Grove lies within about five miles of the road leading from Mariposa to Yosemite, and, from this fact, has become a great resort for visitors. There are in the grove about six hundred large trees of from thirty to one hundred feet in circumference and from two hundred and thirty to three hundred and twenty-five feet in height. These are of the taxodium family, and bear the general name of *Sequoia*—in honor of the Cherokee chief who made an alphabet for his tribe—but are distinguished by the specific name of *Gigantia*. This grove is the property of the State of California, and will be preserved as a public resort. The grove is reached from Mariposa or Yosemite by leaving the trail at Clark's, a station about midway between the two places, and taking an easy road to them about five miles distant. Other groves are in the vicinity, and the Indians report still others, with larger trees, farther in the mountains, which white men have never seen.

The point from which most travelers get their first view of the valley is known as Inspiration Point, a cliff which gives a magnificent outlook over a scene almost unparalleled of its kind. Mr. Clarence King has put on record his unwillingness to be betrayed into the rapture which overcomes the self-restraint of most travelers in these words: "I always go swiftly by this famous point of view now, feeling somehow that I don't belong to that army of literary travelers who have here planted themselves and burst into rhetoric. Here all who make California books, down to the last and most sentimental specimen who so much as meditates a letter to his or her local paper, dismount and inflate." The descent into the valley by the old Mariposa trail, from Inspiration Point, is a distance of about three miles in three thousand feet. Every few rods some new charm is presented to the eye—trees grouped in picturesque back-

ground, and finding bold relief against the glowing tints of the distant cliffs; flowers nodding in the breeze, and little streams rippling and gurgling across the road, as if unconscious of the terrible leaps that must be taken to reach the river below. In contrast to this living grace and beauty are the walls, towers, and domes of the Yosemite, grand and serene, divided into tender shadow and brilliant sunlight, full of a majesty which has nothing in it of the stern and implacable. Approaching the level of the valley and the open meadows, the groves of trees and the winding river, the beautiful park-like nature of the valley fully reveals itself. Trees bending in graceful frame-



Valley Floor, with View of Cathedral Spires.

work inclose various charming pictures as we advance, one of the most attractive being Bridal Veil Fall, as it springs over the wall nine hundred feet high. The upper part sparkles in the sunlight a solid body, then the water is swept into a wild whirl of spray, that comes eddying down in soft mists and formless showers. Emerg-

ing on a broad meadow from the grove, through which we have been passing, the Cathedral Rocks stand against the sky, with their spires all aglow in the sunlight. At their foot the Merced River presses the road so closely that it is forced to wind its way through masses of huge granite blocks, embowered in lofty trees which have grown up since these Titans were dislodged from their places. So one thing follows another—broad stretches of greenery enameled with a million flowers, and noble groves of pine and cedar, so cathedral-like and grand as to suggest the old Druidical haunts, where solemn rites were wont to be performed by hoary priests, and human sacrifices offered to irate gods. A sentiment of deep, slumberous repose, almost impossible to describe, pervades the scene at the sunset-time of day, when the traveler generally arrives. The thick carpeting of pine spindles muffles every footfall; the pillared tree-trunks form vistas that stretch like long-drawn aisles to the deepest forest depths; the interlaced branches do not obscure the luminous sky above, nor hide the tall cathedral spires that burn ruddy in the gleam of falling day. The whole experience is one of profoundest peacefulness and calm.

We have already spoken of Bridal Veil Fall, which, as seen from the valley, appears to have a vertical fall of nine hundred feet, and of Cathedral Rock, a massively sculptured granite pile, rising twenty-six hundred and sixty feet above the levels below. Above the latter tower are the Spires, some five hundred feet higher, standing out from but connected at the base with the walls of the valley. As we proceed up the valley a point of rocks projects out of the mountain wall, terminating in a slender mass of granite somewhat resembling an obelisk. This is known as Sentinel Rock, certainly among the most picturesque and striking rock-forms in the valley, the top reaching a height of over three thousand feet, and the face being almost vertical. The fall, as shown in the illustration, exists in the spring only, when the mountain torrents are swollen with the melting snows; then the force and volume are grand, as is evident from the gorge hollowed out at the foot. A view of this water-torn gully ends all conception of a well-ordered park below. When the spring torrents pour into the valley they leap the cliffs with indescribable fury, carrying down huge rocks and quantities of coarse granite sand, to work destruction as they spread their burden over the level ground. In some places this detritus is piled up to the height of several feet in the course of a single spring. At this season water is an element of destruction, in freezing as well as in thawing. The little rills that filter into every crack and crevice by day, as they freeze by night, enable the frost to ply its giant leverage, and so, where disaster from water seems to threaten everything, there is added the shock of falling cliffs. The granite walls between Cathedral and Sentinel Rocks suffer very much from this disintegration. Great cliffs have fallen, and avalanches of rock have plowed their way down the slope to the bottom of the valley. Amid such surroundings the wreck of a world is suggested, so vast the ruin, so pigmy the climber. Only a feeble impression can be conveyed in words of the effects of mountains of granite, sharp and fresh in fracture, piled one upon the other, the torn fragments of a forest underneath, or strewed about, as if the greatest trees had been but as straws



Sentinel Rock and Fall.

tossed about in the wind. A broad track of desolation leads away up to the heights from which these rocks have been hurled.

Back of Sentinel Rock is Sentinel Dome, forty-one hundred and fifty feet above the valley. From this spot may be had a splendid *coup d'œil* of most of the remarkable features of the valley. On the left, opposite the Bridal Veil Fall, is the Virgin's Tears Fall, where the creek of that name leaps over the wall more than a thousand feet. Just above is El Capitan, an immense block of granite projecting

into the valley, and presenting an almost vertical edge thirty-three hundred feet in height. Although not so high as some of its giant neighbors, yet its isolation, its breadth, its perpendicular sides, and its prominence, as it projects like a great promontory into the valley, make it, as its name indicates, the "Great Chief" of the valley. The walls of the mass are bare, smooth, and totally destitute of vegetation. It is doubtful, according to Professor Whitney, if there be anywhere in the world so squarely cut and imposing a face of rock.

Farther up, and nearly opposite Sentinel Rock, are the Three Brothers, a triple group of rocks of peculiar outline, resembling three frogs sitting with their heads turned in one direction—a likeness which is supposed to have suggested the Indian name Pompompasus, meaning "Leaping Frog Rocks." The highest of the peaks is thirty-eight hundred and thirty feet in height, and from this point is also a favorite place of outlook over the valley. Just beyond the "Three Brothers" may be seen the great waterfall of the valley, known as the Yosemite, formed by a creek of the same name. In the spring, when the air is full of the thunder of falling waters, this cataract is at its grandest, and no falls in the known world can be compared with them in height and romantic beauty. The summit of the upper fall is a little over twenty-six hundred feet above the valley; for fifteen hundred feet the descent is absolutely vertical, and the rock is like a wall of masonry. Below this the fall of water sways and sweeps, yielding to the force of the fitful wind with a marvelous grace and endless variety of motion. For a moment it descends with continuous roar; in another instant it is caught, and, reversing its flight, rises upward in wreathing mists, finally fading out, like a summer cloud, before it reaches the base of the cliff. The stream at the summit, at its medium stage, is estimated to be twenty feet wide and about two feet in average depth. As the different parts of the fall are nearly in one vertical plane, the effect is about as striking and picturesque as if the water made but a single leap from the top of the cliff to the level of the valley.

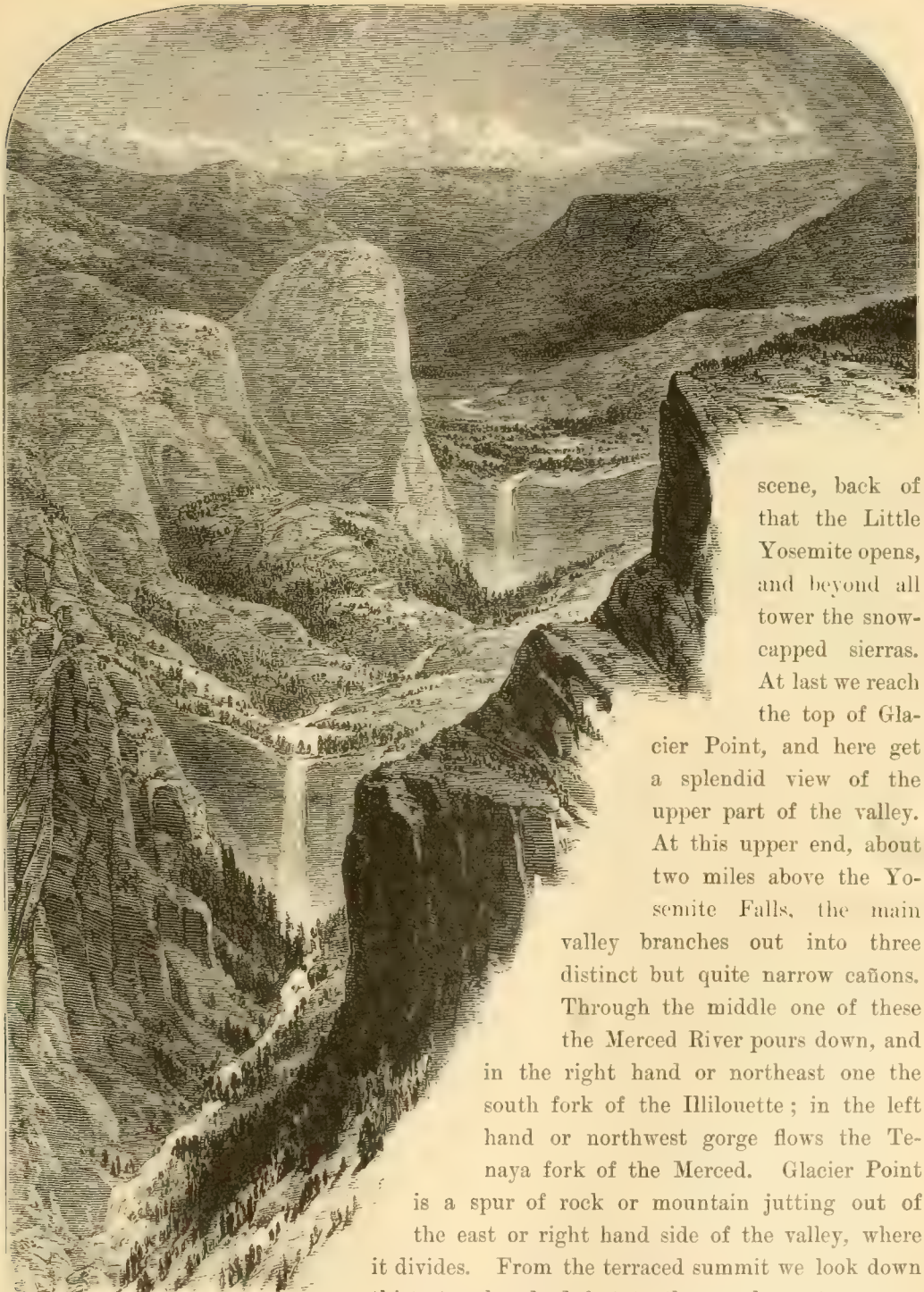
The tourist, wandering up and down in his study of the wonders of the valley, occasionally meets groups of Indians, the native tribe of the region, now nearly extinct. These vagrant and worthless redskins have been pretty much deprived of their savage virtues by the contact of civilization, which has only impressed them with its vices. In general appearance they are robust, and even fat—a condition produced by their diet, which is mostly the acorns with which the valley abounds. The craft, courage, and dexterity of the hunter, in which so many of the Indian tribes excel, appear to be lacking to the Yosemite Indians; and they find a miserable support on the mast which they gather from the earth, like the swine, to which they are so nearly allied in nature and habits. There are about fifty of these Indians, of both sexes and of all ages, living in the valley in the most primitive fashion, their *wallies* or huts consisting of branches stuck in the earth in a semicircular fashion, the leaf-covered boughs meeting overhead. Generally these children of Nature are excessively dirty, but some of them, according to the account of an artist sketching in the val-



The Yosemite Falls.

ley, at least had the instinct of cleanliness. He writes: "While sitting at work on the bank of the river three young squaws came along, and surprised me by deliberately preparing for a bath not a hundred feet from me. They disported themselves with all the grace of mermaids, diving, swimming, and playing for nearly an hour in the snow-cold water. They stole a Chinaman's soap and used it lavishly; and making their fingers do duty as tooth-brushes, they showed a purpose of cleanliness as well as of sport. It was really a charming picture—the water so clearly transparent; the beach shelving in smooth slopes of sand; the trees overarching the stream; beyond all, the Yosemite Fall, swaying in silvery showers, and in the foreground pool these children of Nature playing, their tawny skins wet with water, and glistening with all the beauty of animated bronze. After their bath they favored me with their company. One pulled from its place of concealment a Jew's-harp, and my ears were regaled with 'Shoo, Fly.' Another element, hardly less nomadic or vagabondish in character, is found in the rough fellows who have found their way into the valley as mule-drivers, peddlers, and similar nondescripts, that hover between the lines of civilization and the outer world of lawlessness. So there may be seen, among these queer dwellers in the most beautiful of valleys, Indians, Chinamen, Mexicans, negroes, and white-skinned men not a bit higher in character, living on terms of social fraternity and equality. These vagabonds pick up a precarious livelihood in guiding the guests of the hotels and hiring their scrubby mules and mustangs for excursions. The grand excitement for these residents of the valley is found in horse-racing, and Sunday morning is the favorite racing time. This strange Derby of the Californian wilds presents but little analogy to its more civilized types of race meetings. The horses have no saddles; the riders are stripped of all superfluous clothing, and ride bare-headed and bare-footed, with only a sheepskin or bit of blanket under them; and over the drawn-up knees, and around the horse's body, a surcingle is tightly drawn, literally binding horse and rider into one. An unlimited amount of profanity is indulged in by the ragged loafers of all colors that constitute the crowd of interested spectators, and the excitement is not less than would be witnessed at Jerome Park or at Ascot. Amid the rude turmoil of curses and laughter, too, may be heard the clear clink of gold and silver coin, for many of the onlookers bet their last dollar on the race.

Let us return from this brief digression to a further description of the beauties of the region. A little east of the Sentinel Rock, and directly across the valley from Yosemite Fall, is Glacier Point, from which one of the finest views in the valley may be obtained. The climb to this point is exceedingly interesting. We skirt around the brows of precipices, from which the abyss seems to be bottomless, and out of the somber depths come up the roaring of distant waters and the lulling song of pine-tree forests. The Too-lulu-wack Fall is almost immediately below, and can not be seen; but on the opposite side are the Vernal and Nevada Falls, and the many cataracts of the Merced, which, unlike most of the other streams entering the valley, are very imposing all the year round. The Cap of Liberty rises prominently in the center of the



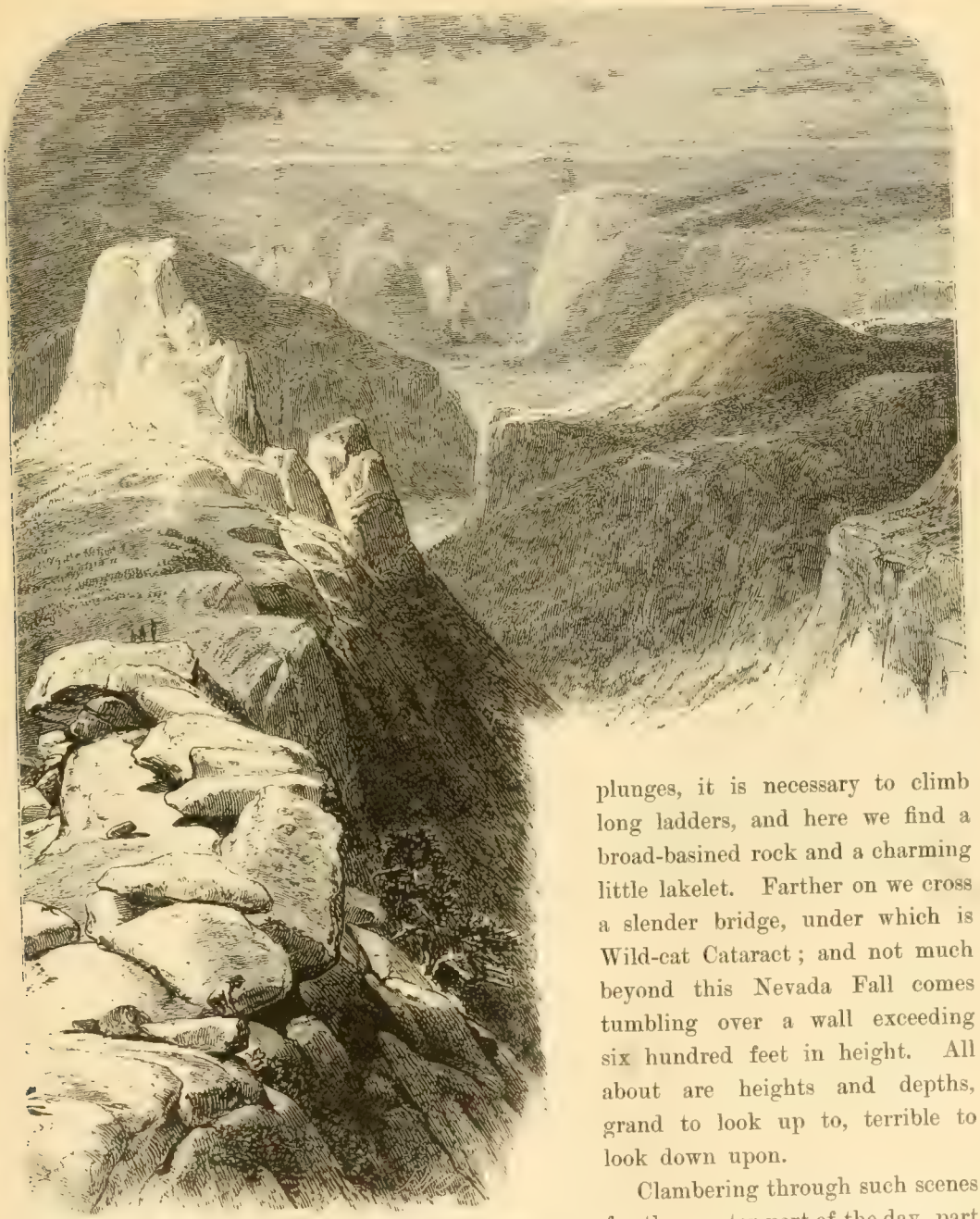
Gorge of the Merced, from Glacier Point Trail.

scene, back of that the Little Yosemite opens, and beyond all tower the snow-capped sierras. At last we reach the top of Glacier Point, and here get a splendid view of the upper part of the valley. At this upper end, about two miles above the Yosemite Falls, the main valley branches out into three distinct but quite narrow cañons. Through the middle one of these the Merced River pours down, and in the right hand or northeast one the south fork of the Illilouette; in the left hand or northwest gorge flows the Tenaya fork of the Merced. Glacier Point is a spur of rock or mountain jutting out of the east or right hand side of the valley, where it divides. From the terraced summit we look down thirty-two hundred feet to the meadows at our very feet. Few can gaze into such depths without shud-

dering and drawing back. Nearly opposite, about a mile and a half away, the Yosemite Fall makes a half mile in three leaps, and shows its graceful proportion to better advantage than from any other point. To the right or northeast we look up Tenaya Cañon, its narrow floor beautiful with tall pines, that almost hide its one jewel, Mirror Lake; but with walls grim and vast, that sweep on the right up nearly five thousand feet and culminate in the grand dominating form of the valley, the Half Dome, which is shown in the opening illustration of this chapter. This is the loftiest of those heights belonging to the Yosemite. It is a crest of granite rising to the height of forty-seven hundred and thirty-seven feet above the valley, and was long considered inaccessible, but in 1879 improvements were made by which tourists are now enabled to reach this commanding height. Across the green depths of Tenaya Cañon towers the symmetrical form of the North Dome, looming up to the altitude of thirty-six hundred and fifty-eight feet. Right under the shadow of the North Dome, at the angle where the Yosemite branches into Tenaya Cañon, is the rounded columnar mass called Washington Column, and the Royal Arches, a magnificent arched cavity of perfect shape.

The bald slope and crest of Cloud's Rest tower beyond and behind the sierras, untrodden yet by the foot of man. There are but few places where so much of the terrible and the beautiful is combined.

There are five trails through which a horse may get in or out of the Yosemite Valley. The Mariposa trail, through which we entered, passing Inspiration Point, is at the lower end. The Coultersville trail comes in at the same end, but on the opposite side. A third passes near Glacier Point, and enters at the foot of Sentinel Rock, about midway up the valley, on its eastern side. A fourth passes through Merced Gorge, by the Vernal and Nevada Falls; and the fifth through Indian Cañon, on the west side, north of Yosemite Fall. The last is barely passable, and very little used. The Coultersville and Mariposa routes bring the traveler to the valley by stage, but the others are little more than a horse-back trail, though safe enough by this mode of travel. The trail through Merced Gorge, after reaching the top of Nevada Fall, crosses the stream and the southern end of the charming Little Yosemite Valley. This valley, more than two thousand feet above its famous neighbor, is one of the many great granite basins peculiar to the country. The bottom is about three miles long, and consists of a pleasant succession of meadows and forests, through which flows the Merced River. The sides are smooth, bare slopes of seamless granite, ribboned with brown bands; and here and there are strange dome-like forms, which so much perplex the geologist. An excursion to the little Yosemite Valley is of considerable interest, but demands several nights of camping out. In places the trail twists from right to left in sharp zigzags, and is so steep that the horse and rider on the turn above appear to be directly overhead. Within sight, the river roars and tumbles in a succession of cataracts. On this route we see the beautiful Vernal Fall, which has an unbroken plunge of four hundred feet, drenching the narrow gorge with spray, and filling the air with rainbow shimmerings. To get to the top of the rock, over which the fall



General View of Yosemite, from Summit of Cloud's Rest.

plunges, it is necessary to climb long ladders, and here we find a broad-basined rock and a charming little lakelet. Farther on we cross a slender bridge, under which is Wild-cat Cataract; and not much beyond this Nevada Fall comes tumbling over a wall exceeding six hundred feet in height. All about are heights and depths, grand to look up to, terrible to look down upon.

Clambering through such scenes for the greater part of the day, part of the time finding it necessary to dismount and lead one's mustang or mule, the floor of the upper valley is at last reached, and a resting-place for the night is gladly sought by the tired traveler, before pursuing his explorations further. Here we are at an elevation greater than the top of Mount Washington. The ascent to the top of Cloud's Rest is the goal of ambi-

tious excursionists who penetrate to the upper valley. This rises six thousand feet above the lower Yosemite Valley, or nearly ten thousand feet above the sea. The ascent is easily made on horseback to within a few hundred yards of the summit. This proves to be a long, thin crest of granite, so piled with loose and apparently insecure blocks that it needs no little courage to walk between them. On the one side one beholds a descent for hundreds of feet; on the other, or west side, it is thousands—falling away in an unbroken surface of granite, at an angle of not less than forty-five degrees, and with no obstacle to stay a falling body until it should reach the depths of Tenaya Cañon, over a mile below.

From this spot is a point of vision where the outlook surpasses all others in the valley in comprehensiveness. To the north, over intervening cañons and gorges, the sierra peaks, with their paleness tinted with many delicate hues, rise sublimely desolate against the cloudless, somberly blue sky. Their shoulders are clad with snow and ice, and the flanks are grooved with the scars of long-extinct glaciers. On lower levels there is a sparse growth of trees, which scarcely relieves the nakedness of the grim mountain-sides. Turning from the sierras, that rise from three to five thousand feet above our point of view, we look down six thousand feet into the Yosemite, whose peculiar trough-like formation runs at right angles to the trend of the mountains. The familiar forms of the inclosing walls, and green groves and meadows of the valley floor, upon which the Merced sparkles, may be plainly seen, but angles of rock hide the waterfalls. A glance at the illustration gives a good idea of the general features of the lower valley, as seen from this point. The form on the left, in light, is Half Dome. On the right, in the middle distance, is Sentinel Dome, sloping down to Glacier Point, a small bit of Sentinel Rock projecting just beyond. Farther away are the Cathedral Rocks and the Spires. Opposite to them, on the right, is El Capitan. Immediately underneath, in the picture, is North Dome, sweeping down to Washington Column, and separated from the Half Dome by Tenaya Cañon. The Yosemite Fall is to the right and back of the North Dome. The gorge of the Merced and Nevada and Vernal Falls is to the left and back of Half Dome. Bridal Veil Fall is back of the Cathedral Rocks, away in the distance.

Some years not less than four thousand visitors come and go between May and October, the throng representing every nation and class of people on the globe. There are now a number of excellent hotels, where good accommodation may be had at a reasonable price, considering the great expense and difficulty of getting supplies in this remote region. Saloons have been opened by enterprising individuals, and the visitor may enjoy his cocktail here as well as in San Francisco or New York. While the primitive grandeur of the scenery remains unchanged, one may now see it under the most pleasant conditions. A telegraph connects the Yosemite with the outer world, and it only remains that a railway should be completed to the place to make a tour to this famous spot as easy as to Niagara Falls.



A Live-Oak on the Ashley.

THE LOWLANDS OF THE SOUTH.

South Carolina scenery—Early settlements of the State—Charleston—The rice-culture—Savannah—Characteristics of a lovely Southern city—The lowlands of Alabama—The forest-wilderness of Pascagoula—The mouth of the Mississippi—Romantic history of the Father of Waters—The Mississippi below New Orleans—The cypress-swamps—New Orleans, the "Queen of the South"—Sketches of life in New Orleans—Mississippi navigation—The magnolia-forests and Spanish moss—The sugar-plantations—Characteristic impressions of the lower Mississippi—Inundations and crevasses—The cotton industry.

THE lowlands of our Southern country have their distinctive charm as well as the mountain-region which so proudly lifts itself toward the clouds. Certainly in the historic and human element, which, after all, has so powerful an influence in determining our impressions even of scenery, the low-country is unspeakably more interesting. Let us make a rapid tour through these portions of the South, sure in the anticipation that we shall find a great fund of amusement and instruction even in a passing glance, which necessarily overlooks many a scene worthy of study.

Beginning with South Carolina, we shall find a kind of scenery alike varied and semi-tropical. From the sea the marshes or savannas, stretching back seventy miles from the coast, seem perfectly level; but there are in many places bluffs or eminences crowned with delicate foliage. A vast panorama—of fat meadows watered by creeks; of salt and fresh marshes; of swamp-lands of inexhaustible fertility, from which spring the sugar-cane and cypress; of the rich firm soil, where the oak and hickory stand in solid columns, and of barrens studded with thousands of young pines—salutes the eye. The innumerable branches which penetrate the low-lying lands from the sea have formed a kind of checker-work of island and estuary. The forests along the banks of the stream and scattered between the marshes are beautiful. The laurel, the bay, the palmetto, the beech, the dogwood, and the cherry are overgrown with wanton, luxuriant vines, which straggle across the aisles where the deer and the fox still wander. In the spring the jasmine and the cherry fill the air with the perfume of their blossoms; in winter the noble oaks in their garments of moss, and the serried pines, preserve the verdure which the other trees have lost, and give to the landscape an aspect of life and beauty. When the rice-plantations are submerged, and the green plants are just showing their heads above the water, and nodding and swaying beneath the slight breeze passing over the hundreds of acres, the effect is indescribably novel and beautiful.

Port Royal was the scene of the first settlement in South Carolina, and was therefore the first-cousin of Plymouth Rock in Massachusetts. Indeed, the motive of the settlement was nearly parallel. Admiral Coligny foresaw the time when the oppressed Huguenots would need a place of shelter, and it was his emissary, Jean Ribault, who, with a band of hardy seamen and men-at-arms, sailed northward from the blooming coast of Florida, and anchored in the harbor at the mouth of the broad Yemassee River, which is more like an estuary than a river. They named it and the river emptying therein, Port Royal. To-day the little settlement made by the adventurous Frenchman has nothing to mark it, not even the remains of the fort he built. In the sixteenth century the country claimed by the Spaniards as Florida, and by the French as New France, was supposed to extend from the Chesapeake to the Tortugas along the coast, and inland as far as any settlements could be planted and defended. So for many years South Carolina and Florida had a history in common.

The development of South Carolina as an English province began after the restoration of Charles II. The country was granted to a proprietary government under the royal charter, and the constitution under which the colonists, who were all of the better class, lived, was framed by the celebrated John Locke. The province was subdivided into counties, seigniories, baronies, precincts, and colonies. Each seigniory, barony, and colony consisted of twelve thousand acres, and it was provided that after a certain term of years the proprietors should not have power to alienate or make over their proprietorship, but that it "should descend unto their heirs male." Thus was laid a good foundation for a landed aristocracy, for no one could hold land in the province except under authority from the lords proprietors. A large accession

came to the colony through the revocation of the Edict of Nantes in France, which sent hundreds of Huguenots to South Carolina, and from these original *émigres* are descended many of the best South Carolinian families.



Glimpse of Charleston and Bay.

One hundred years after the charter was granted by Charles II. Carolina had arisen to considerable commercial eminence. The principal settlements then were Charleston, Beaufort, Pury'sburg, Jacksonborough, Dorchester, Camden, and Georgetown.

The white population of the province was about forty thousand; that of the negroes about ninety thousand. The Carolinian colonists were known in England, above all the other settlers in the New World, for their wealth, luxurious living, and high spirit. It was said that there were a larger number of people with property amounting to five or ten thousand pounds sterling in the province than could be found elsewhere in the same population. They were then characterized by the same qualities for which they have since been distinguished—social pride, extravagant personal habits, martial spirit, and generous hospitality. The province readily obtained unbounded credit. The staples it produced were of great value, and agriculture and trade were constantly enlarged by the importation of ship-loads of negroes. A little before the time of the American Revolution the exports from Carolina in a single year amounted to seven hundred and fifty thousand pounds sterling. Such was South Carolina before the Revolution; and what this proud State has been since, what important place it has occupied in making our history from 1776 to 1861, is too familiar to be mentioned.

The destruction which came to Port Royal Island and its principal town, Beaufort, one of the most delightful sea-side resorts of the South, during the late war, are well known; and now only the slouching, indolent negro lounges in the sun, where once his late master lived in luxury. But let us turn from this sad picture of ruin and desolation, which the returning prosperity of the State has not yet healed, and make a visit to Charleston, the principal town of the State, and a beautiful city, in spite of what it suffered less than twenty years since from the misfortunes of war.

Very charming is the old city nestling on the waters, swan-like, at the confluence of the broad Ashley and Cooper Rivers, and fronting on the spacious harbor over whose entrance the scarred and historic Fort Sumter keeps watch and ward. The city lies so low, and seems so literally to rise out of the waters, that the name of the "American Venice" has been given to it. From the harbor the effect is very striking. The long, palm-studded shores of the bay, the islands and forts that dot its surface, the mansions that front the waters, and the spires that lift to the skies, make up a very effective picture. The first impression of the city itself is peculiar. There are no splendid avenues, nor many public buildings—only a few fine old churches, and many noble private mansions standing in a sort of dingy stateliness amid bowers of magnolias and other flowering shrubbery. The glare and smartness of Northern cities are absent, but in their place we notice a somber, rich tone, such as comes of time and hereditary respectability, marking the aspect of all the better houses. The old Charleston mansions were always built with the gable-end to the street. On one side rises a tier of open verandas, in the lower of which the main entrance is placed. Generally the grounds are inclosed by a high brick wall, and through an open gateway one may catch a glimpse of flowers, shrubs, and vines that bloom within the inclosure. The rich dark green of the magnolia half screens the unsmoothed brick walls far above, and seems to hold the venerable structure in the hush of deep repose. The residence streets of the Palmetto City on the side next the Ashley River are

peculiarly picturesque and attractive. They are always bordered by beautiful gardens. A labyrinth of long wooden piers and wharves runs out on the lagoons and inlets near the Ashley, and the boasted resemblance of Charleston to Venice is doubtless founded on the perfect illusion produced by a view of that section from a distance. The magnificent and the mean, however, jostle each other at very close quarters.

Let us climb to the top of some high building, such as the Orphan Asylum, toward the hour of sunset on a pleasant evening, and get a panoramic glimpse of the sea-girdled city. On the sea-front stretches the Battery, one of the most delightful and airy promenades in any American city, while the streets leading to it are curious and striking. Beyond there is the far stretch of the sea and the long, low shores. Far down the harbor is Fort Sumter, and nearer is Fort Pinckney, standing guard over the direct approach to the town. The mass of buildings which offer themselves to the view have the queer roofs and strangely shaped chimneys which remind us of Antwerp or Amsterdam. In every way the view is odd and old-fashioned, except where the new buildings recently erected obtrude their more modern physiognomies. There are many interesting churches of a quaint old type in Charleston, and on some of them, particularly the Huguenot, are interesting ancient inscriptions. But perhaps the greatest attraction to the visitor is the lowland character of the suburbs. The city is situated at the confluence of the Cooper and Ashley Rivers, and the banks of these streams have all the characteristics of Southern landscapes. Oaks, magnolias, jasmines, and myrtles give splendor and profusion to the picture, while rice and cotton fields enrich and vary the picture. The main road from Charleston into the country is an avenue of remarkable beauty. The road emerges from Charleston almost im-



Ashley River.

mediately into a green wilderness, and for a long distance it is canopied by the boughs of pines, oaks, and magnolias with rich effect. There are no signs along the road of the close proximity of a great city. You seem a hundred miles from any town. The live-oak of the Southern lowlands is the most picturesque of trees. It is famous not merely on account of its magnitude, but from its quaint, fantastic, picturesque form. A large tree of this kind is in its shape and character a study for an artist. Lifting the long, low branches that sweep almost to the ground, you seem to be in a vast forest cathedral. The quaint trunk is covered with knobbed protuberances, and scarred and seamed as if with the marks of many centuries. The branches, mammoth trees of themselves, shoot out at a low elevation in a nearly horizontal line, extending probably a hundred feet, dipping at their extremities to the ground. The pendent moss from every bough hangs in long, sweeping lines, and the sun flickers through the upper branches, touching up moss, bough, and trunk, and relieving the gloom of the interior with bright flashes of light. Many a noble estate, celebrated for its live-oak avenues, in the near neighborhood of Charleston, was laid in almost irretrievable waste during the late war. The magnolia shares pre-eminence with the live-oak as a decorative element in the landscape of the suburbs of Charleston, and a rich profusion of flowering creepers and shrubs fills in the picture with a wealth of color and perfume which, to be appreciated, must be experienced.

One of the most valuable and interesting industries of South Carolina is found in its rice-plantations. And it is on the rice and cotton regions of the sea-board counties, too, that the stranger finds some of the most striking and curious phases of South Carolina life, for it is here that the Southern negro presents his most barbaric type. The lowland negro of South Carolina has a dialect which influences of life in America have hardly impressed at all. English words tumble from his mouth with such an uncouth enunciation, and are so mixed with African terms, that it is nearly impossible to understand him. The thick, mumbling tones sound more like the cries of a wild animal than of a human being. These negroes have the strangest religious ceremonies and superstitions, and voudooism has a far stronger hold than Christianity even among those professing to be pious. They have changed but little since slavery days, though they have learned that the franchise is a great power. The degradation of the lowland negro of the rice and cotton region is specially instanced in the fact that the marriage relation is almost unknown, and that men and women living together are called man and wife, in many cases one negro having several wives. In no part of the South does the black man show the features of his primitive African state so vividly as on the coast-region of South Carolina.

Rice-culture has been the prominent industry of the State since the days of proprietary government, more than two centuries ago. With the determination of the planters to make rice the principal object of their care, came the necessity for importing great numbers of slaves, and the sacrifice of hundreds of lives in the arduous toil of clearing the ground and preparing the soil. The cypress-swamps gave place to

fields of waving green, and the rivers were diverted from their channels to flood the vast expanse in which the negroes had set the seeds. The rice-culture and the slave system were peculiarly associated, as no other crop raised demands such severe labor and such dangerous exposure. Before the outbreak of the late war there were more than a million acres of rice-land in cultivation, but at the present time the area is much less, for it is not easy to get the black man to engage in a kind of cultivation which he so peculiarly detests. Still, there are many rice-plantations covering thousands of acres, and single planters sometimes employ from five to eight hundred hands. Let us take a glance at a rice-plantation among the low-lying lands of the South Carolina sea-coast at the harvest-time. We find a wide expanse of fields cut into squares by open trenches, through which water from the river is admitted to every part of the land, for the vicinity of a river is an indispensable fact to the



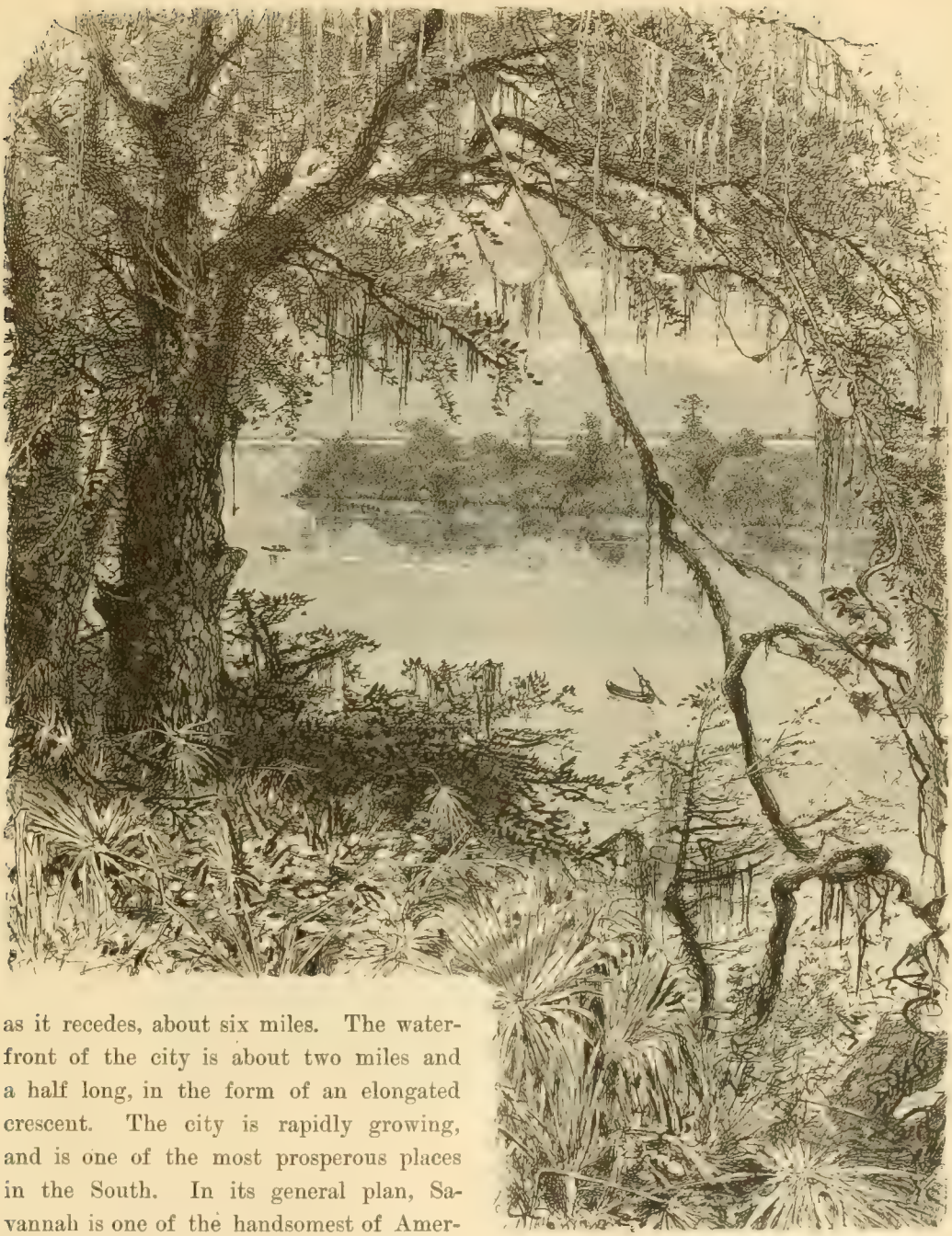
Unloading Rice Barges.

culture of rice. The breeze blows musically among the tall canes along the banks of the stream, in whose sedgy recesses hide the alligator and the serpent. Perhaps in the distance an antlered deer breaks cover, and stands for a moment scanning the horizon before taking flight. In the far distance a white sail may be discerned, perhaps, as a schooner works her way into the mouth of the river on the route to the rice-fields; and long processions of black boys and girls may be seen with baskets on their heads and the most horrid jargon in their mouths, who are waiting to load the rice. A rice-plantation is a great hydraulic machine maintained by constant warring against the water. The utmost vigilance is necessary, and labor must be ready at a moment's notice for the most exhaustive efforts. Alternate flooding and draining take place several times during a season, and one part of a crop must be flooded while adjacent portions are dry. Fields are divided into sections, and trunks

or canals convey water from the river separately. The whole apparatus of locks, floodgates, canals, banks, and ditches, is of the most extensive kind. The slightest leak in the dikes might easily ruin a whole plantation, and the "trunk-minders," or watchmen, are constantly on the alert to discover the first sign of danger.

Harvest is hardly completed by March, when the sowing begins again. The trunks are opened in each section the day on which the seed is planted, and the fields are flooded. The mules that drag the plows through the marshes are booted with leather contrivances to prevent them from sinking in the treacherous black ooze. In autumn the fields are yellowish, tinged here and there with green, where young rice is springing up from the shoots recently cut down. The rice is piled up in ricks, when cut, and swarms of birds carry away large quantities. A rice-plantation during harvest-time is a lively scene. The men and women work in the different sections under field-masters. The women, with their naked feet and half-bare limbs, their heads wrapped in bandannas showing all the hues of the rainbow, fill the air with the dissonance of their uncouth jargon, and stagger in and out of the marshes with a weight of rice-stalks on their heads rivaling that carried by the men. In the field, at the thrashing-mill, at the winnowing-machine, among the great rice-stacks, where packing, sorting, and unloading from barges are going on, both sexes show the same coarse, brutish, and densely animal types of faces. Such is a picture of life in the South Carolina low-country, and it is not essentially different from the characteristics of old slavery times, though the system of labor has been changed.

One of the most beautiful rivers of the South is the Savannah, which forms the boundary between South Carolina and Georgia. From its source, high up in the mountains of the interior, it flows four hundred and fifty miles to the sea. For about a hundred miles from its mouth, the Savannah runs through a low country of great beauty and fertility, embracing much of the best rice and cotton land of the South. The wild swamp-wastes that mark its lower shores are full of a strange, weird beauty, and the groves of massive live-oaks, hung with their mossy banners that shadow and conceal the mansions of the planters, have a most captivating grace. Below the city of Savannah, which is eighteen miles from the mouth, the traveler is struck with the wide expanse of grass-clad salt-marsh, through which the river meanders, forming many islands, but preserving at all times ample width for the passage of vessels of the largest class. The city of Savannah, being in latitude thirty-three degrees, and so near the Gulf Stream as to be within reach of its atmospheric current, has all the mildness of the tropics in winter, without the intense heat in summer—the mean temperature being about that of the Bermuda Islands. The sultriness of the heated term in Savannah is less oppressive than in New York, being mitigated by a soft, humid atmosphere and the never-failing breath of the trade-winds. For Northern invalids the climate of Savannah, with the conveniences and comfort of city life, is regarded by many as preferable to sanitary retreats farther south. The city occupies a promontory of land rising on a bold bluff about forty feet in height close to the river, extending along its south bank for about a mile, and backward, widening



On the Savannah River.

as it recedes, about six miles. The water-front of the city is about two miles and a half long, in the form of an elongated crescent. The city is rapidly growing, and is one of the most prosperous places in the South. In its general plan, Savannah is one of the handsomest of American cities; and, in view of its antiquity and the fact that its founders were, for the most part, poor refugees seeking a home in the wilderness among hostile savages, it is a matter of surprise that they should have adopted a plan at once so unique, tasteful, and practical. The streets, running nearly east and west and north and

south, are of various widths and cross each other at right angles, the very wide streets, which run east and west, being alternated with parallel narrower streets, and each block intersected with lanes twenty-two and a half feet in width. The streets running north and south are of nearly uniform width, every alternate street passing on either side of small public squares, or plazas, varying from one and a half to three acres in extent, which are bounded on the north and south by the narrower streets, and intersected in the center, also, by a wide street. These plazas—twenty-four in



A Savannah Street-Scene.

number, located at equal distances through the city, handsomely inclosed, laid out in walks, and planted with the evergreen and ornamental trees of the South—are among the distinguishing features of Savannah; and in the spring and summer months, when they are carpeted with grass, and the trees and shrubbery are in full flower and foliage, they afford delightful shady walks, as well as play-grounds for the juveniles, while they are not only ornamental, but are conducive to the general health of the people.

Among the peculiar features of Savannah which command the admiration of strangers are the wideness of its principal streets, abounding with shade-trees, and the flower-gardens which, in the portions of the city allotted to private residences, are attached to almost every house. Ornamental trees of various species, mostly evergreens, occupy the public squares and stud the sidewalks in all the principal thoroughfares; while the gardens abound with ornamental shrubbery and flowers of every variety. Conspicuous among the former are the orange-tree, with its fragrant blossoms and golden fruit in their season; the banana, which also bears its fruit; the magnolia, the bay, the cape-myrtle, the stately palmetto, the olive, the arbor-vitæ, the flowering oleander, and the pomegranate. Flowers are cultivated in the open air, many choice varieties—queen among them all, the beautiful *Camellia Japonica*, which flourishes here in greatest perfection, the shrub growing to a height of twelve to fifteen feet—blooming in mid-winter. During most of the year, Savannah is literally embowered in shrubbery; and in the early spring months, when the annuals resume their foliage and the evergreens shed their darker winter dress for the delicate green of the new growth, the aspect of the city is truly novel and beautiful, justly entitling it to the appropriate *sobriquet* by which it has long been known, far and wide, of the "Forest City."

The old city of Oglethorpe's time was located on the brow of the bluff, about midway between the present eastern and western suburbs, and its boundaries are still defined by the Bay, and East, West, and South Broad Streets. Upon the river-front, a wide esplanade, about two hundred feet in width, extending back from the brink of the bluff, was preserved for public purposes. This is called the Bay, and is now the great commercial mart of Savannah. As commerce grew up, warehouses and shipping-offices were built by the first settlers, under the bluff, between it and the river. In time these were replaced by substantial brick and stone structures, rising four and five stories high on the river-front, with one or two stories on the front facing the Bay, connecting with the top of the bluff by wooden platforms, which spanned the narrow roadway beneath, passing between the buildings and the hill-side. Some of these buildings, spared by the great fire of 1820, which consumed the larger portion of the old town, are interesting for their antique and quaint architecture.

Among many beautiful suburbs of Savannah, Bonaventure Cemetery engages the interest more than any other. This is located about four miles from the city, on Warsaw River, an estuary connecting with the Savannah, and the scenery of it has long been noted for its Arcadian beauty. A hundred years ago it was the seat of a wealthy English gentleman, and the grounds around the mansion, of which only a dim tracery of the foundation remains, were laid out in wide avenues and planted with native live-oaks. These trees, long since fully grown, stand like massive columns on either side, while their far-reaching branches interlacing overhead like the frilled roof of some vast cathedral, the deep shade of their evergreen foliage shutting out the sky above, and the long gray moss-drapery depending from the leafy canopy, silent and still, or gently moving in the breeze, give to the scene a weird and strangely somber aspect at once picturesque and grandly solemn. Many years ago Bonaventure was devoted to the pur-

pose for which it is so peculiarly fitted by nature, and became the burial-place of many of the prominent families of Savannah, whose memorial monuments add to its solemn beauty. Recently the place has been purchased by a company, by whom it has been inclosed, the trees trimmed, the grounds cleared of their rank growth, laid out in lots, and opened to the public as a cemetery. In this operation much of the wild beauty of Bonaventure has been literally trimmed away, thus demonstrating the fact that, in the picturesque at least, it is not always in the power of art to improve upon nature.

Savannah is not only the principal city of Georgia, but one of the great lowland cities of the South, and probably nowhere among our Southern Atlantic and Gulf cities can be found a more charming and highly cultivated social life. It suffered less by the late civil war than most of the important Southern cities, and it has grown and improved surprisingly during the last decade and a half. It is one of the great cotton and rice marts, and the enterprise of the State of Georgia, which has always been known as the "Yankee State of the South," is well represented in the energy and activity of its business interests.

As Georgia is divided into the mountainous region which characterizes the central and upper parts of the State and the lush lowlands adjacent to the sea, so Alabama separates itself into the breezy uplands of the interior and the low country lying on the Gulf of Mexico, though a long, narrow stretch of Florida reduces the Gulf coast to comparatively short limits. Mobile is one of the typical lowland cities of the South. The lovely bay on which the chief city of Alabama is located extends thirty miles inland to the mouth of the Alabama River. The city is bathed in an atmosphere of sleepy and dreamy quiet, and to the Northern stranger who visits it in winter it appears like a veritable lotus-land. He finds a tropical luxuriance of sunlight and blossom where he had left Arctic rigors of snow and ice, and perfume-laden breezes instead of piercing northwestern blasts. Mobile shares the reputation of Northern Florida as a winter sanitarium. The suburbs and country immediately surrounding the city are exceedingly attractive. Groves of massive magnolias line the shores of the bay, and the roads are everywhere screened from the hot sun by vines, water-oaks, and pines. Residences, from the negro's thatched hut to the costly villa, are smothered with a burden of flowering creepers, and the gardens glow with the most gorgeous colors.

The principal industrial interest of Alabama is the growth of cotton, which also contributes largely to the commerce of Mobile. A large portion of the lands drained by the lower Alabama and Tombigbee Rivers is well adapted to the culture of this staple, and the light-draught steamers bring down annually from three to four hundred thousand bales. The falling off in the production of cotton in this State is shown in the fact that in 1860 the product was nearly a million bales. This does not necessarily prove that Alabama languishes in her agricultural interests, as a diversity of crops now takes the place of the old monopoly of cotton, the Southern farmers having learned the lesson that a variety of products is conducive to general prosperity as against dependence on a single interest. The timber-region of Alabama comprises a belt ex-

tending entirely across the lower portion of the State, bordering on Florida and the Gulf. This is rich in forests of long-leaved pine, and on the river lowlands grow white, black, and Spanish oaks, and the black cypress. In this region the gathering of naval stores is so productive an industry that it supersedes the raising of cotton. Between Mobile and Pascagoula Bays many settlements have sprung up within a few years, and enterprising young men from the North and West are sending millions of feet of lumber to the New Orleans market. Land can be purchased for a trifle, and there are many bays and estuaries, where vessels from any port in the world can load directly from the saw-mills. The line of the Mobile & New Orleans Railway, skirting the Gulf of Mexico, passes through this magnificent timber-region, and spar-cutting forms an important branch of the lumbering industry. The country bordering Pascagoula Bay, and skirting the river of the same name in Mississippi, just over the Alabama line, has long been noted for its grand forests, which furnish the finest possible material for ships' masts and spars; and the inhabitants, even before the war, under the old slavery *régime*, were a singularly hard-working, thrifty, energetic class. The Pascagoula region is not only distinguished for its valuable forests, but for the abundance of its game. Deer range freely through the pine-lands, and they are so abundant and even tame that they are frequently killed wandering about the cleared fields in company with the cattle. Wild-turkeys too are found in inexhaustible abundance and tempt the ardent sportsman by their shy and cunning ways, which tax the utmost skill and knowledge on the part of the hunter. The following description of the family of a typical yeoman of this region gives one a good notion of life in the Mississippi forests:

"His family consisted of a wife and eighteen children. Three of them were girls, whose average weight I estimated at two hundred pounds. They were all performers on the violin and accordeon, and were so fond of dancing that, whenever two or three spar-cutters happened along to join them, they 'would dance all night, till broad daylight.' Though abundantly able to live in a manner allied to elegance, this family, true to habits which prevail among a large class in the South, could not appreciate the sensation of real comfort. With two or three exceptions, wooden benches were used in the place of chairs, one iron spoon answered for the whole family, and the mother, when at the supper-table, added the sugar or 'short-sweetening' to the coffee with her fingers, and tasted each cup, to see if it was right, before sending it to its proper destination. Such things as andirons, tongs, and wash-basins, were considered useless, and the bedstead assigned to the guest was a mere board, yet the sheets were charmingly fringed with cotton lace, and in their freshness did not remind one of those alluded to by Izaak Walton. All the family, excepting the parents and two sons, were barefooted, and yet the dancing girls sported finger-rings in abundance, and wore basque dresses of calico. Only two of the eighteen children had ever traveled from home as far as Mobile, and the first crop knew not how to read: the second were more fortunate, for a school had lately been established in a settlement about five miles distant, which consisted of fifteen scholars, seven of whom were the

children of the host. He was the postmaster for that region, and the uncalled-for copies of certain weekly papers were used to ornament the walls of the habitation.



A Home on the Pascagoula.

During one of the nights that I spent under this roof, the 'schoolmaster was abroad,' for he had come on a visit to the planter's family; the event was celebrated by a jollification which beggars description, and, when he started for his log-cabin, which

was three miles distant, he went alone through the pathless woods, carrying a gun in one hand and a pine-torch in the other. In the yard attached to this house, pigs, dogs, geese, and chickens, were abundant, and kept up a perpetual clatter; and, hanging from the beams, or stacked in corners, were no less than thirteen guns."

But, to see the lowlands of the South under their most picturesque and striking conditions, we must visit Louisiana and the banks of the great Father of Waters, which rolls its swift and turbid flood through a region so flat that it has to be diked for protection against the mighty but treacherous stream. For many a long mile the eye rests on massive levees built up to guard the rich lands adjoining, and this feature of the Mississippi through so large a portion of its length makes one of the most characteristic and suggestive aspects for the tourist who travels by steamboat. Louisiana, where the lowland scenery of the South is seen in its most luxuriant and impressive aspects, is from the historic stand-point one of the most interesting of States. For a century and a half the region then included in the name was coveted by all nations, sought for alike with strokes of diplomacy and the sword, by Spanish, French, and English. It was the plaything of monarchs and the bait of valiant adventurers, and its past is linked with all that is romantic in Europe and on the Western Continent in the eighteenth century. From its vast limits was born that sisterhood of Western and Southwestern States which now constitute so important a portion of the country in extent, population, and wealth of production.

Not much more than half a century since, the frontier of Louisiana extended nineteen hundred miles. It embraced within its limits a million and a half square miles, and it was washed by the Atlantic and Pacific Oceans as well as by the Gulf of Mexico. From Bienville the first French to Claiborne the first American governor, the administration of social and political affairs was charged with strange and romantic facts, which sound like fiction or melodrama. So, too, fancy cast a weird spell over the great rivers and forests, and peopled the unknown tropical vastness with phantasm and mystery. What wonder is it even yet that the fragment which still retains the name of Louisiana, forty thousand square miles of low prairie, alluvial, and sea-marsh, is associated in our minds with so much that is unique and fascinating? The one great fact which gives its special significance, both to the physical and social life of Louisiana, is that vast semi-tropical flood which pours its waters through the State into the Gulf of Mexico.

Just fifty years after Columbus discovered the Bahamas, Hernando de Soto, one of the most heroic of the Spanish explorers, reached the banks of the Mississippi River, some seven hundred miles from its mouth, after a long march from Florida, with the wreck of a once powerful force. More than a century passed after the discovery of the great river before its solitudes were again opened by the intrusion of the white man. During this time many strange and terrible myths had grown up about the stream—stories founded on the reports of the returned companions of De Soto. It was believed that the great flood was precipitated into the earth where its outlet ought to be, and that its banks were guarded by dragons and other terrible

creatures. These fictions, so agreeable to the spirit of the age, found confirmation in the stories of the Indians who lived on the banks of the Fox and Illinois Rivers. In 1673 the daring monk Marquette, after untold hardships, reached the shores of the upper Mississippi. His acute mind instantly jumped to the conclusion that the Gulf



At the Mouth of the Mississippi.

of Mexico could be reached by continuous navigation; and the great Western valley was declared, in virtue of Marquette's discovery, to belong to France. Nine years later, La Salle accomplished the predicted feat, and gave the name of Louisiana to the territory adjoining the Gulf and the great river along its entire length. When he returned to Canada, La Salle fitted out an expedition to reach the mouth of the

Mississippi by sea, but he was assassinated by his men in the present Galveston Bay while he was making his search. It was left for another Frenchman, D'Iberville, to discover the mouth of the Mississippi eighteen years later. Instead of one vast current pouring into the sea, it was found to consist of numerous arms or passes, through low swamps and islands formed by the sediment brought down by the water. This net-work of creeks, bayous, and passes is known as the Delta of the Mississippi, and covers an area of fourteen thousand square miles. It is slowly advancing into the Gulf of Mexico by the shoaling caused by the deposition of fresh sediment brought down by the river. Three of the main passes bear the titles of the Southwest, South, Northeast, and the fourth is called à l'Outre.

The delta even in its more solid portions appears to be an interminable marsh, and it is no wonder that La Salle spent so much time in vainly searching all along the extensive line of the Gulf coast to find the proper mouth of a grand river, without ever suspecting the truth. For many miles before reaching the passes, the muddy Mississippi water tumbles and rolls, clearly defined from the blue waters of the Gulf. At last the turbid brown colors everything, and you see before you, rising up from an endless level, a solitary light-house built at the entrance of the Southwest Pass. Just inside the Northeast Pass is a huge mud-bank, called the Balize. Here during early colonial times many of the French and Spanish settlers, impatient of restraint, and attracted by the splendid game and fish as well as by the chance of wrecking, planted themselves. It was from these outlaws of the Balize that the celebrated French smuggler and buccaneer, Lafitte, drew a large portion of his following. The last half-century has utterly changed the Balize and its inhabitants. The island, richly clad in green, is adorned with pleasant residences, and the pilots —for such is the profession of all the men—are celebrated for their skill and the beauty of their stanch little vessels. A long time after the passes have been entered, only the practiced eye of the pilot can determine the channel, by what appears a regular current flowing on in the general waste. As we ascend, the coarse grass, which shows at the top of the water, gets more and more thick, and finally there appear great lumps of mud around which boils the rushing water. The sediment of the river has at last obtained a foothold. It becomes more and more defined, and finally we observe low shores, though hardly distinguishable from a mere swamp, and water-soaked shrubs, for ever fretted by the lashing of the waves, lift their green crowns above all. At last you reach the head of the pass, and you see the great stream in all its breadth of volume, the surface glistening, if perchance the sun shines brightly, with the hues of brass and bronze. Vegetation more and more asserts itself, though it is not till after passing Forts Jackson and St. Philip that you observe any striking forest-growth. As you approach within threescore miles of New Orleans, you find the banks of the river clearly defined above the water-level, and permanent signs of cultivation. Along the coast, as the river-banks are called, are the gardens which supply New Orleans with its vegetables. Soon we notice large sugar-plantations and stately dwelling-houses with wide verandas picturesquely embowered in a great variety



A Cypress Swamp.

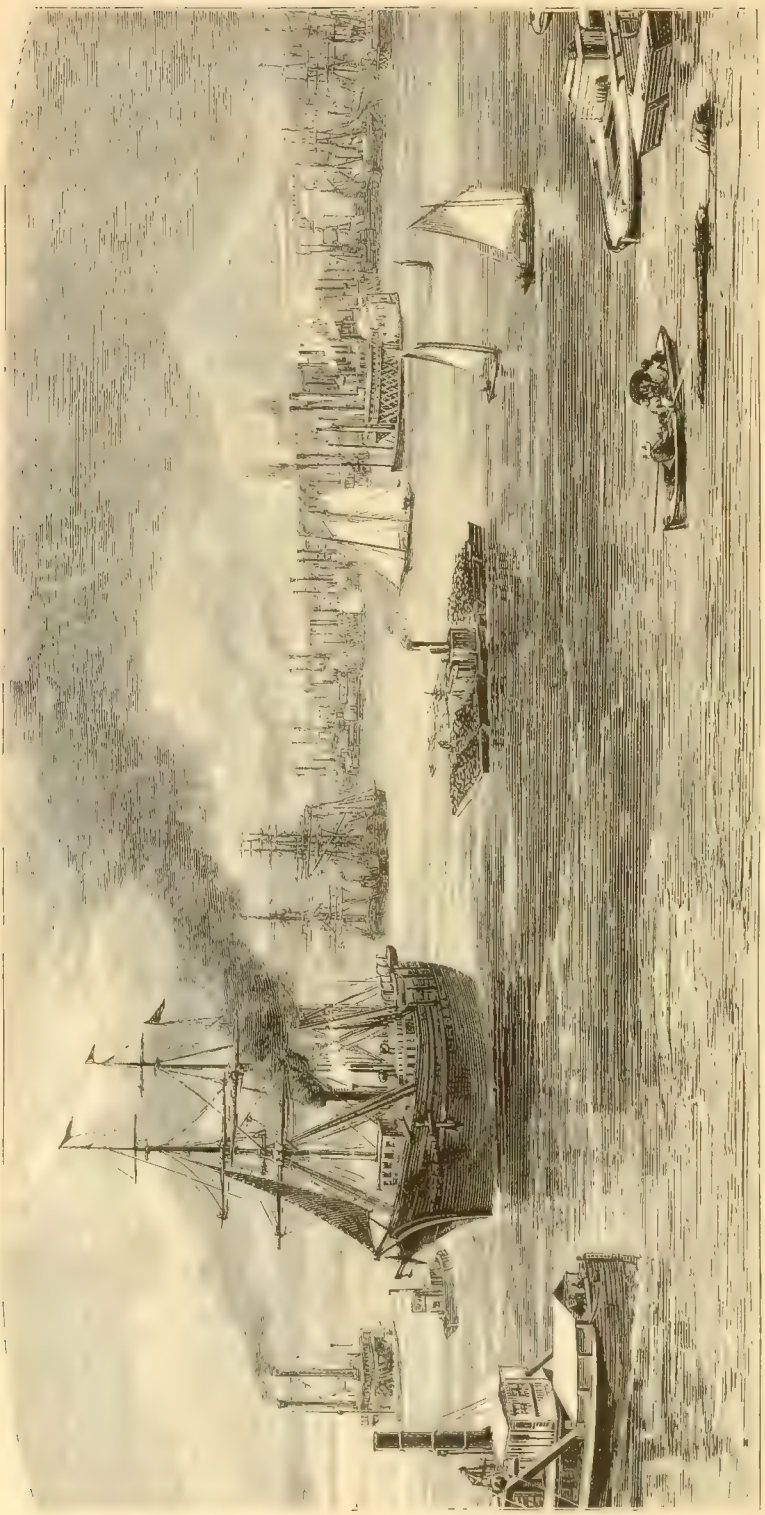
of noble trees unknown in colder climates. Thus may be read, in the trip from Balize to New Orleans, a complete history of the formation of the river-banks—from water to ooze; from ooze to mud; from mud to soil; from grass to ferns; from ferns to shrubs; from shrubs to magnificent forest-trees.

Chief among the typical trees of the swamps of the lower Mississippi is the weird and gloomy cypress. Louisiana rivals Florida in the abundance of its cypress-growths, for the tree needs abundance of warmth, water, and the richest possible soil. In these semi-tropical swamps the growth of this remarkable tree is often a hundred feet. The base of the trunk is covered with ooze and mud, and the cypress-knees, which spring up from the roots, look like the necks of bottles, and are as hard as steel. The horseman who attempts to cross a flooded cypress-swamp does so at the greatest peril to his beast, for the floundering horse is almost sure to break his legs against these ambushed iron clubs. The bark of the tree is spongy and fibrous, and the trunk often attains the height of fifty or sixty feet without a single branch. The leaves of the cypress are softly delicate and beautiful, looking like green silken fringes, appearing in marked contrast to the tree itself and the gloomy parentage of the swamp. So durable is cypress-wood that it is said that trees, which have been buried a thousand years, retain every condition of the perfect wood. Through the cypress-swamps may also be seen the palmetto, the green, spear-like foliage of which adds much to the variety of vegetal appearance in these forest solitudes.

Amid the immense swamps, here and there, are broad expanses of unsubmerged lands. Here grow the canebrakes, to be lost in which is nearly certain death, for they form an almost pathless labyrinth, in whose depths lurk disease and death. Then, again, we meet open vistas of prairie, where the lush soil, open to the influences of air and sunlight, bursts forth in forests of live-oak, the most picturesque of American trees. In olden times, when the United States had a merchant marine of great magnitude, and the use of iron and steel for ship-building had not yet been made practicable, the live-oaks of Florida and Louisiana were of much value; but they have of late years offered but little inducement for the labors of the wood-cutter and lumber-dealer.

It is said that Bienville, the first Governor of Louisiana, laid the foundations of New Orleans on the first solid ground he met with in ascending the river. There are now fifty miles' length of excellent arable land below the city; but this is the accretion of a century and a half, and, where now are to be seen smiling plantations and market-gardens, Bienville only saw a thick ooze, with here and there a cypress-swamp. The approach to the great metropolis of the South is indicated to the traveler up the river by abundant signs. A hundred columns of smoke rise in the air, and large fleets of sailing-vessels being towed to the ocean appear on the river. Craft of every sort line the banks, and at last the Crescent City appears, stretching miles away behind its massive levees, which, however, are so often inefficient against the assault of the river-god.

If the history of the grand old colonial empire of Louisiana is full of romance, that of New Orleans is the very focus and center of that romance. From the very



New Orleans, from the River.

first the town possessed a social life replete with the chivalrous graces of the French court, and stately dames and airy, beruffled gentlemen promenaded in this swamp-surrounded, river-imperiled fortress with Parisian elegance and ease. There were but few churches, and the colonists would gather around great wooden crosses in the open air for mass, and then separate to make love, fight duels, go hunting in the adjoining forests, and attend dancing-parties or horse-races as they had been in the habit of doing in *la belle France*. Nowhere on the North American Continent did the customs and the characteristics of the mother-country so vividly and exactly impress themselves as in the infant me-

tropolis of New Orleans. Along the river, for many miles beyond the city, French noblemen established great plantations, and lived lives of lordly ease and indulgence. To-day there is many a French creole planter who traces his line to the greatest families of Old France. During the thirty years that preceded the cession of Louisiana to Spain, New Orleans grew to be a thriving and bustling town, wonderfully picturesque in its life and surroundings. During the period of Spanish domination its French characteristics were modified but not essentially altered. The narrow, bigoted, melancholy traits of the Spaniard have left as their memorials those many-balconied, thick-walled houses which exist in some old parts of the city, and impress the visitor as so quaint. During the Spanish occupation there was such serious collision between the two sets of inhabitants, so much bitter hate of the new-comers on the part of the French, that the Spanish garrison existed as a fortified camp, in perpetual fear of an uprising, and with frowning cannon trained on the city ready for instant use. Still, Spanish society and civilization have impressed themselves on the local *patois*, which is the vernacular of the negroes and a large portion of the poorer whites.

New Orleans, with all the prosaic changes wrought into her social fabric, still remains one of the most picturesque cities in the New World; and the stranger, indeed, can hardly persuade himself that he is in a capital which belongs to the same nation as do New York, Philadelphia, and Chicago. The French market furnishes one of the most interesting and curious spectacles of the city. Mr. Edward King, in his interesting work on "The Great South," gives an animated description of the French market: "The French market at sunrise on Sunday morning is the perfection of vivacious traffic. In gazing upon the scene, one can readily imagine himself in some city beyond the seas. From the stone houses, balconied and fanciful in roof and window, come hosts of plump and pretty young negresses, chatting in their droll *patois* with monsieur the fish-dealer, before his wooden bench, or with the rotund and ever-laughing madame, who sells little piles of potatoes, arranged on a shelf like cannon-balls at an arsenal, or chaffering with the fruit-merchant while passing under long, hanging rows of odorous bananas and pineapples, and beside heaps of oranges, whose color contrasts prettily with the swart or tawny faces of the purchasers.

"During the morning hours of each day, the markets are veritable bee-hives of industry: ladies and servants flutter in and out of the long passages in endless throngs; but in the afternoon the stalls are nearly all deserted. One sees delicious types in these markets; he may wander for months in New Orleans without meeting them anywhere else. There is the rich, savage face, in which the struggle of Congo with French or Spanish blood is still going on; there is the old French market-woman, with her irrepressible form, her rosy cheeks, and the bandanna wound about her head, just as one may find her to this day at the Halles Centrales in Paris; there is the negress of the time of D'Artaguette, renewed in some of her grandchildren; there is the plaintive-looking Sicilian woman, who has been bullied all the morning by rough negroes and rougher white men as she sold oranges; and there is her dark, ferocious-looking husband, who handles his cigarette as if he were strangling an enemy.

"In a long passage between two of the market-buildings, where hundreds of people pass hourly, sits a silent Louisiana Indian woman, with a sack of gumbo spread out before her, and with eyes downcast, as if expecting harsh words rather than purchasers.

"Entering the clothes-market, one finds lively Gallic versions of the Hebrew female tending shops where all articles are labeled at such extraordinarily low rates that the person who manufactured them must have given them away; quavering old men, clad in rusty black, who sell shoe-strings and cheap cravats, but who have hardly vitality enough to keep the flies off from themselves, not to speak of waiting on customers; villainous French land-sharks, who have eyes as sharp for the earnings of the fresh-water sailor as ever had a Gotham shanghai merchant for those of a salt-water tar; moldy old dames, who look daggers at you if you venture to insist that any article in their stock is not of finest fabric and quality; and hoarse-voiced, debauched creole men, who almost cling to you in the energy of their pleading for purchases. Sometimes, too, a beautiful, black-robed girl leans over a counter, displaying her superbly molded arms as she adjusts her knitting-work. And from each and every one of the markets the noise rises in such thousand currents of *patois*, of French, of English, of good-natured and guttural negro accent, that one can not help wondering how it is that buyer and seller ever come to any understanding at all.

"Then there are the flowers! Such marvelous bargains as one can have in bouquets! Delicate jasmines, modest knots of white roses, glorious orange-blossoms, camellias, red roses, tender pansies, exquisite verbenas, the luscious and perfect virgin's-bower, and the magnolia in its season—all these are to be had in the markets for a trivial sum. Sometimes, when a Havana or a Sicilian vessel is discharging her cargo, fruit-boxes are broken open; and then it is a treat to see swarms of African children hovering about the tempting piles, from which even the sight of stout cudgels will not frighten them.

"Sailors, too, from the ships anchored in the river, promenade the long passage-ways; the accents of twenty languages are heard; and the child-like, comical French of the negroes rings out above the clamor. Wagons from the country clatter over the stones; the drivers sing cheerful melodies, interspersed with shouts of caution to pedestrians as they guide their restive horses through the crowds. Stout colored women, with cackling hens dangling from their brawny hands, gravely parade the long aisles; the fish-monger utters an apparently incomprehensible yell, yet brings crowds around him; on his clean block lies the pompano, the prince of Southern waters, which an enthusiastic admirer once described as 'a just fish made perfect,' or a 'transatsi shad.' Toward noon the clamor ceases, the bustle of traffic is over, and the market men and women betake themselves to the old cathedral, in whose shadowed aisles they kneel for momentary worship."

The New Orleans levee, with the life and surroundings connected with it, make also a most striking and curious phase of New Orleans. The river opposite the city is more than a mile and a half in width, and, notwithstanding the velocity of

the current and the distance from the sea, there is a regular ebb and flow of the ocean-tide. Practically, the river is a magnificent bay, as grand as any arm of the sea. As we stand on the levee, there is a consecutive mile or more of steamers in sight, from the gorgeous floating palaces which carry between the great cities of the West, down through every conceivable modification of the steamboat to the absurd stern-wheeler, built for navigation in the shallow streams tributary to the Arkansas and Red Rivers. Stately ships from every land lie side by side, their masts and cordage revealing a forest of tangled lines. The river is continually beaten into foam by the army of ferry-boats and steam-tugs, which fill the air above with long trailing streamers of smoke. The levee in New Orleans is a wide, artificial plateau, extending miles each way, and crowded with the teeming productions of the counties and States which are in any way tributary to the great river. A perfect babel of tongues is heard among the workers, and you are made to realize that you are at the foot of a vast and unsurpassable inland navigation.

Before the application of steam to navigation, river-commerce was carried on by keel-boats and flat-boats. When the flat-boat reached its destination, it had accomplished its end, and was broken up for fire-wood; but the keel-boat not only brought down a cargo, but, loaded with foreign products, was "cordelled" back by months of hard work up the river to her starting-point. The keel-boatmen of the Mississippi, now an extinct race, were remarkable for their physical strength and for their unique qualities. These sons of Anak, in muscular power and ability to endure fatigue, were probably without rivals in any age or country; and had they lived in ancient Greece, would have been victors in the old games which gave such intense delight to a people who gloried in physical prowess. Children of nature, the keel-boatmen were terribly pugnacious and fierce when their passions were aroused, but generous, simple-minded, and placable. They were slaves of their word, and a promise made by one of these men was rigidly fulfilled. Some of the most interesting traditions of the Mississippi River cluster around the memories of keel-boatmen, and it will be long before such names as that of Mike Fink fade away from local legend.

But the cumbrous flat-boat still exists, and remains an important agent for bearing to the great distributing markets of the world the agricultural products of our Western States; though, before long, it is probable that it will have given place entirely to the barge drawn by the tug. These huge edifices are built on large scows, sometimes a hundred feet or more in length, the superstructure being a great building in the shape of a parallelogram. A flat-boat with a full load is like a dozen country-stores afloat. To keep them off the "snags" and "sawyers," which threaten the unwary river navigator, the flat-boats are furnished with four immense sweeps, which in time of emergency have to be worked with great skill and strength.

The New Orleans levee is a city of itself. Immense piles of cotton-bales, hogsheads of sugar and molasses, and tierces of rice, can be seen on every hand, and elevators, which have recently been built, show significantly that New Orleans is reaching out her long arms to contest the grain-transporting trade for foreign markets

with cities which have hitherto scoffed at competition. The difficulties of passing through the bar in the Southwest Pass have already been principally removed, and the Crescent City only needs the projected canal to be cut through from the river just below the city to Lake Borgne, an arm of the Gulf of Mexico almost due east from New Orleans, to equip her favorably for the commercial combat.

Though the climate of New Orleans and its liability to terrible epidemics of yellow fever have been, and always will be, a drawback to her prosperity, there seems every reason to forecast a brilliant future for this city. The improvements in the navigation of the upper Mississippi and its tributaries; the completion of a direct air-line railroad to New York, and of another to the Pacific Ocean; and the various other improved facilities for business and travel, will make New Orleans the New York of the South. Lines of steamships already connect her with all the sea-ports of the Atlantic coast, Cuba, and Mexico, as also with Liverpool, Havre, Bremen, and Hamburg. It is by no means impossible that there are those now living who will survive to see the chief city of Louisiana with a population of a million of people.

The plantations lining the river-banks above New Orleans on both sides have become portions of a charming landscape scenery, which combines the novelty of the finest exotics with the best-preserved specimens of the original forest. Here may be found specimens of the choicest tropical plants; orange-trees three quarters of a century old, with great gnarled trunks and strong arms, still bearing their fruit in perfection; the banana, with its fine sweeping leaves of the deepest green, waving like banners in the breeze; pecan-trees of immense height, bearing one of the most delicious of tropical nuts; and fig, pomegranate, and other trees yielding luscious fruits. Hedges of jasmine lead up to the doors of the planters' residences, and vie in sweetness with the night-blooming cereus and the myriad variety of roses, which grow on shrubs rather like trees than like the stunted bushes of our northern climate. The rural population of lower Louisiana is largely made up of a most refined and interesting class, being the descendants of the old French settlers, many of whom belonged to the best families of France; but, of course, since the late war, changed social conditions have somewhat impaired that wealth and leisure which made these planters' lives such a pleasant commingling of ease and dignity.

One of the most striking beauties of the lower Mississippi is found in its grand magnolias. This flowering giant often reaches the height of ninety feet. The form is symmetrical, and each particular bough has individual qualities. The leaves are large and crisp; where the surface is exposed to the sun, of a polished dark-green, but of a velvety gray underneath. While the foliage of the live-oak, with which the magnolia is generally found in company, is for ever bending and rustling in the breeze, the magnolia has no response to the coquetry of the winds. But, as a recompense for the beauty of wavy motion and the music of Æolian whispering, this imperial tree wears a robe of splendid blossoms, the like of which is difficult to match in the vegetable kingdom. These blossoms look like greatly magnified orange-blossoms, and they are so fragrant that the rich scent is almost oppressive. The magnolia-tree in



A Magnolia Swamp.

full bloom, with the Spanish moss enshrouding it in a gray, neutral background, makes a wonderful picture.

The scenic interest of the forests and swamps of the lower Mississippi has always something of mystery and gloom associated with it. All things are on a water-level,

and gazing aloft through the towering trees makes one feel as if he were in some underground cavern, getting glimpses of sunlight through chinks and crevices. In spots where there is an opening in the trees and a flood of sunlight can enter, the lush earth bursts into a profusion of the most gorgeous-hued flowers. The scarlet flower of the lobelia flashes like a coal of fire; the hydrangea, in the North a timid shrub, becomes a great mound of delicate blue flowers; and the fuchsia towers upward a stalwart tree, radiant with countless flowers of white, crimson, and purple.

Around the trees festoons of grape-vines curl like serpents, running up sometimes sixty feet in height, and looking like a great mass of cordage. In the distance, as you peer through the vistas of the solemn forests, you see the shimmer of far-away lagoons, and the water-marks on the trees, twenty feet above your head, remind you of some tremendous overflow which had made the country a great lake under a woodland canopy. But now you look around you and see only standing pools yellow with the sap of decayed vegetation, and sending out poisonous effluvia. The stagnant water is only disturbed by the wriggling of the deadly moccasin. Throughout all these lowlands poisonous snakes abound, and the hunter is tempted by the overflowing animal life. Deer, panthers, wild-cats, and alligators abound, and the skill of the good rifle-shot is never at a loss for a mark. In fact, much, if not all, which has already been said of the scenery of the Florida Everglades in a previous chapter will apply with equal force to that of the lower Mississippi, though, of course, a large part of the latter has been more modified by civilization. A deep and lasting impression was made on the minds of the early discoverers by the vegetable drapery which hangs from the trees of the Louisiana forests, generally known as Spanish moss. One can fancy that the survivors of De Soto's expedition, as they floated broken-hearted down the great river which they had discovered at such cost, looked on this strange production of nature as mourning weeds worn for the death of their heroic chief. Spanish moss is a parasite that lives by inserting its delicate suckers under the bark and drawing existence from the flowing sap. It is only found on trees which have become enfeebled by age or accident, and here, like a vegetable vampire, it sucks out the heart's-blood of its victim and wraps it in a winding-sheet of weird and ghostly gray, that looks in the distance like streamers of mist. These huge, gray, waving banners often hang down to the very ground from the top of trees sixty feet in height. In many cases old trees which have been artificially stripped of this parasite assume again nearly all of their pristine strength and vigor. The part which Spanish moss performs in the functions of nature is interesting. It consumes the hard and iron-fibered woods, which would otherwise last as vegetable wrecks for centuries, and thus quietly makes way for new growths. Poets have justly likened Spanish moss to the shattered sails of ships, torn to shreds by the teeth of the tempest or the iron hail of battle, but still hanging to the rigging. To the French writer Chateaubriand it suggested ghosts. But, with whatever analogy one tries to explain its effects on the fancy, it is certain that it gives the lowland forests of the South an aspect utterly unique and individual. Within a few years this parasite has become an important object of commerce. When

stripped from the trees and thoroughly dried and thrashed of its delicate fibers of bark and leaf, the long, thready moss shows a fiber as black as jet, and almost as thick and elastic as horse-hair, which it strikingly resembles. For the stuffing of mattresses,



Gathering Spanish Moss.

cushions, and other upholstery purposes it is of great value as a substitute for horse-hair, and the gathering of the moss has become a valuable field of labor for the inhabitants of the swamps and forests, both above and below New Orleans.

The great characteristic industry of Louisiana is the culture of the sugar-cane, and the manufacture of the cane into sugar and molasses. It is the only agricultural industry in the world which involves not only the raising of the natural product, but the preparation of that product by manufacture for the market. Though the sugar-planting interest extends far above New Orleans—in fact, nearly to the northern limits of the State—the most rich and fruitful plantations are below that city. The narrow strip which, for fifty or sixty miles below New Orleans, protects the Mississippi channel from the Gulf, is crowded with splendid sugar-plantations. The alluvial soil of recent formation is extremely prolific, and may be called one of the gardens of the



Cutting the Sugar-Cane.

world. The rivers and bayous furnish fish and oysters of the finest quality; the forests swarm with game; the gardens bring forth tropical fruits and vegetables in great abundance; and all the conditions of life are easy. Here the profitable culture of sugar attains its best conditions. From the river one is charmed to note the picturesque grouping of sugar-houses and quarters, the mansions peeping through splendid groves of live-oak and magnolia, and the rich fields stretching away for miles. The sugar-houses on many of the larger plantations are crammed with costly machinery worth thousands of dollars; and, indeed, sugar-planting on a big scale demands large capital. Before the war the work of cultivating the cane was conducted in a crude and unscientific manner, even on the largest plantations, as an outcome of the very

conditions of slave-labor. But the difficulty of securing reliable and efficient hands during the last fifteen years has caused a large use of labor-saving machinery. The best implements, even to steam-plows or gang-plows drawn by a stationary engine, are now found on the principal sugar-plantations, to a great advantage, as planters acknowledge, over the old methods.

A portion of the sugar-cane is preserved to furnish young sprouts for the spring planting. These shapely and richly colored stalks lie all winter in the furrows, and at the joints which occur every few inches are found the new buds of promise out of which the fresh crop must come. When the spring plowing begins, the stalks are laid along the beds of the drills, and each shoot as it makes its appearance is carefully watched. The labor of hoeing and otherwise tending the growing cane is incessant even now, when hand-labor is largely superseded by horse-cultivators. Under the slavery *régime* the sugar-fields of Louisiana represented to the negro mind the very *ultima Thule* of horror and wretchedness. When the cane reaches its perfection there comes a jubilee, for it means an unstinted feast on the sweets so beloved by the darkey. All hands now work night and day in cutting the cane and drawing it to the sugar-house, for it is dangerous to leave the stalks a moment uncut after they have reached the right condition. The great rollers are kept grinding without cessation by successive reliefs of hands, who keep high wassail and wax fat on the toothsome juice. A sugar-mill consists of a series of endless rollers, through which the cane passes till every drop of its saccharine burden is squeezed out. The refuse is used as the fuel for the furnace which drives the engine, so that no coal or wood is ever needed except for the refining-mill. From the crushed arteries of the cane wells forth a thick, impure liquid. This has to be immediately cared for, or it will spoil. The clarifying process is quite complicated, and represents a very high degree of mechanical and chemical skill. It must have been a study full of suggestion and interest during former times to step from the fields, where the labor of raising the cane was carried on in the most crude and brutal form, to the sugar-houses, full of admirable machinery representing the highest results of intellectual skill and knowledge.

The stages through which the cane-juice passes are various. There are the great open trays traversed by copper and iron steam-pipes; there are the filter-pans, filled with bone-dust, through which the liquor trickles down; now it wanders through separators and then through bone-dust again, onward toward granulation in the vacuum-pans, and then into coolers, where the sugar is kept in a half-liquid state by means of revolving paddles; until finally it comes to the vessels in which, by rapid whirlings, all the molasses is thrown out; and the molasses, leaving the dry sugar ready for commerce, goes meandering among the pipes under the floors, and round and round again through the whirling machines until every trace of sugar has been finally taken from it.

While there are yet many large sugar-plantations in the South where the *régime* of labor is carried on in the old patriarchal style, as nearly as the free system will

permit, the tendency is to break up the plantations into small farms—a fact which, however detrimental to what is picturesque in the rural life of the sugar-region, can not but be highly conducive to industrial interests. Co-operative ownership of the expensive machinery necessary for sugar-making is becoming more and more the vogue. In some cases the sugar-growers sell their cane to some enterprising owner of machinery, or have it crushed and manufactured on shares, just as the Western farmer has his wheat thrashed out by the owner of a machine. This method enables the comparatively poor man to enter into competition with the capitalist planter, and it is not doubtful that in the end it will revolutionize the old system of sugar-planting, which still survives the wreck of slavery. The last census proves that the sugar-industry of Louisiana is steadily improving, the yield for 1880 having been 218,314 hogsheads—larger than that of any year since the beginning of the late war. It is not that the year was more favorable in its conditions, but that there was a larger acreage of cane grown.

Though there are portions of the lower Mississippi exceedingly charming, so far as the richest productions of nature can beautify its banks, yet the impression on the whole is very different from that which is ordinarily associated with what is beautiful. The splendid vegetation and the great forests delight and amaze the beholder, but there is an element of mystery and gloom in the scene withal. The dreary solitude, and often the absence of all living objects, save the huge alligators which float past apparently asleep on the drift-wood, and an occasional vulture attracted by its impure prey on the surface of the water; the trees with long pendants of gray moss fluttering in the wind; and the gigantic river rolling for ever onward the vast volume of its dark and turbid waters—such are the features of the strange landscape which impresses the eye of the river-tourist. "The prevailing character of the lower Mississippi," says a recent traveler, "is that of solemn gloom. I have trodden the passes of Alp and Apennine, yet never felt how awful a thing is nature, till I was borne on its waters through regions desolate and uninhabitable. Day after day and night after night, we continued driving downward toward the south; our vessel, like some huge demon of the wilderness, bearing fire in her bosom and canopying the eternal forest with the smoke of her nostrils. The effect on my spirits was such as I have never experienced, before or since. Conversation became odious, and I passed my time in a sort of dreamy contemplation. At night I ascended the highest deck and lay for hours gazing listlessly on the sky, the forests, and the waters, amid silence only broken by the clanging of the engine. The navigation of the Mississippi is not unaccompanied by danger, arising from what are called *planters* and *sawyers*. These are trees firmly fixed in the bottom of the river, by which vessels are in danger of being impaled. The distinction is that the former stand upright in the water, the latter lie with their points directed down the stream. The bends or flexures of the Mississippi are regular in a degree unknown in any other river. The action of running water, in a vast alluvial plain like that of the basin of the Mississippi, without obstruction from rock or mountain, may be calculated with the utmost precision.

Whenever the course of a river diverges in any degree from a right line, it is evident that the current can no longer act with equal force on both its banks. On one side the impulse is diminished, on the other increased. The tendency in these sinuosities, therefore, is manifestly to increase, and the stream which hollows out a portion of one bank reacting on the other, the process of curvature is still continued, till its channel presents an almost unvarying succession of salient and retiring angles. In the Mississippi the flexures are so extremely great, that it often happens that the isthmus which divides different portions of the river gives way. A few months before my visit to the South, a remarkable case of this kind had happened, by which forty miles of navigation had been saved. The opening thus formed was called the *new cut*. Even the annual changes which take place in the bed of the Mississippi are



A Mississippi Bayou.

very remarkable. Islands spring up and disappear; shoals suddenly present themselves where pilots have been accustomed to deep water; in many places, whole acres are swept away from one bank and added to the other; and the pilot assured me that in every voyage he could perceive fresh changes. Many circumstances contribute to render these changes more rapid in the Mississippi than in any other river. Among these, perhaps the greatest is the vast volume of its waters, acting on alluvial matter peculiarly penetrable. The river, when in flood, spreads over the neighboring country, in which it has formed channels, called *bayous*. The banks thus become so saturated with water, that they can oppose little resistance to the action of the current, which frequently sweeps off large portions of the forest. The immense quantity of drift-wood is another cause of change. Floating logs encounter some obstacle in the river, and become stationary. The mass gradually accumulates: the water, saturated with

mud, deposits a sediment, and thus an island is formed, which soon becomes covered with vegetation. Some years ago the Mississippi was surveyed by order of the Government, and its islands, from the confluence of the Missouri to the sea, were numbered. I remember asking the pilot the name of a very beautiful island, and the answer was, '573,' the number assigned to it in the hydrographical survey, and the only name by which it was known."



A "Crevasse" on the Mississippi River.

One of the most remarkable features of the great Father of Waters is found in those tremendous overflows called *crevasses*, which occur with alarming frequency, and are among the dreadful exigencies against which the resident of the lower Mississippi Valley never feels secure. When they do occur, the confusion, distress, and trepidation they cause are terrible to witness. Gaunt starvation then threatens thousands, and only the hand of governmental aid and private charity saves them from a miserable death. In an hour the planter is doomed to see a thousand acres, which have been carefully planted and tended, covered with water two or three feet deep. The country for many a long mile back becomes a swamp, the roads are transformed

into rivers, the lakes are seas. These inundations are so little understood, that a brief description of the physical condition of the river will be interesting as throwing some light on the subject.

What is called the lower Mississippi begins at St. Louis, twenty miles above which the Missouri pours in its muddy flood to swell its waters. The name is more usually applied, however, to the river after it reaches Cairo, where it receives the additional volume of the Ohio River. Thenceforward the Mississippi flows through alluvial lands, and it meanders from one bluff to another, these being from forty to one hundred miles apart. Passing below Cairo, the river strikes the bluffs at Columbus on the eastern or Kentucky shore. It skirts them as far as Memphis, Tennessee, having on its west the broad earthquake-lands of Missouri and Arkansas. It again crosses its valley to meet the waters of the White and Arkansas Rivers, and skirts the bluffs at Helena in Arkansas, flanking and hemming in the St. Francis with her swamps and sunken lands. Again crossing the valley toward the eastward, another re-enforcement comes from the Yazoo River near Vicksburg, creating an immense reservoir on the east bank. From Vicksburg to Baton Rouge the river hugs the eastern bluffs, and from Baton Rouge to the mouth is the pure "delta country" for a distance of two hundred miles. All of this valley below Cairo is under the high-water line of the powerful stream, which drains several million square miles of country, and the efforts of men to stay an inundation are almost puerile. The valley is divided into several natural districts, one embracing the lands from Cairo to Helena, where the St. Francis debouches; another from Helena nearly to Vicksburg, on the east bank, including the Yazoo Valley; a third comprises the country from the Arkansas to the Red River, known as the Macon and Tensas Valley; a fourth runs from the Red River to the Gulf on the west side; and a fifth from Baton Rouge to the Gulf on the east side. Many of these districts are imperfectly leveed, and others are entirely unprotected. When high water does come, the fact that there are only a few levees only increases the danger of a general inundation. In slavery-times the planters in the lowlands were able, by incessant preparation and vigilance, to guard against ruin by water; but now they have so little control over a labor which thinks only of the present and not of the future, that they are not able to do much to confine the river-god within his due metes and bounds. The only hope seems to be the execution of a grand national work by the General Government, perhaps in co-operation with the State governments. But bills to this effect have been so often defeated in Congress, that the end seems far off. Certainly it would appear that Government could carry out nothing of more importance, for in no other way can the rich Southern lowlands ever be secured against a ruin which recurs every few years. It is said, indeed, that the lands overflowed the year before give a much larger crop; but this offers poor compensation for those who have suffered absolute loss of all they had in the world.

For nine months of the year the river-planter pays but little attention to the levee. But the spring comes, and the melted snows which had fallen at the foot of the Rocky Mountains must find their way to the sea. Then he realizes what a frail hold

he has on his young crops and the accumulated improvements of a large estate. The spring rains assist in making the water-barriers unstable; rats, mice, and beetles have burrowed into them, and thousands of craw-fish, with their claws as hard as iron, have riddled them with holes. Under such conditions the rising of the river becomes a terrible threat. Some night the alarm is given that a crevasse is threatened. All is consternation. Plantation-bells are rung, and men on fleet horses scour the country around, giving the alarm. Men, women, and children assemble with whatever implements they have and hasten to the point of danger. But, in spite of all effort, the levee crumbles away under the tremendous assault and the river pours through, roaring like a cataract. It takes but a short time, after the break has defied all attempts at obstruction or repair, to convert the surrounding country for miles into a waste of waters. When the inundation has subsided, if it does subside in time to allow a second planting, the planter thinks himself lucky if he makes half a crop, while the poorer farmers are temporarily ruined.

The former capital of Louisiana, Baton Rouge, is pleasantly situated on the first bluff which the Mississippi steamboat-voyager sees in ascending the river, the site being some forty feet above the highest rise of the river. The slope of the bluff is gentle and gradual, and the town, as beheld from the river, with its singularly picturesque French and Spanish houses and its queer squares, looks like a finely painted landscape. The whole country, above and below, is a delightful garden, lovely and fragrant with all the fruits and flowers of the tropics. Above Baton Rouge the cotton interest gradually supplants that of sugar. Indeed, Northern Louisiana, Texas, Arkansas, Mississippi, and Tennessee are more and more becoming the great cotton region of the country. Both labor and capital are pouring into these States in the pursuit of cotton-raising, while they are being withdrawn from South Carolina, Georgia, and Alabama, where the lands have been longer worked, and consequently impoverished.

The next important town above Baton Rouge is Natchez, Mississippi, mostly built on a high bluff, two hundred feet above the level of the stream, though there is a portion of the city lying on the narrow strip of land between the foot of the hill and the river, which is known as "Natchez-under-the-Hill." Here are located many of the most important business houses, while it is on the bluff above that one sees the finer private residences, each one embowered in fine gardens. The suburbs of Natchez were notable before the war for their beautiful and expensively furnished planters' seats, but many of these were ruined during the late war. The climate is pleasant and very salubrious; the winters are temperate, though variable, and the summers long and equable. Natchez was founded by D'Iberville, in 1700, and is replete with historic associations. Here once lived and flourished the noblest tribe of Indians on the continent, and from that tribe it takes its name. Their pathetic story is festooned with the flowers of poetry and romance. Their ceremonies and creed were not unlike those of the fire-worshipers of Persia. Their priests kept the fire continually burning upon the altar in their Temple of the Sun, and the tradition is, that they got the fire from heaven. Just before the advent of the white man, it is

said, the fire accidentally went out, and that was one reason why they became disheartened in their struggle with the pale-faces. The last remnant of the race were still existing a few years ago in Texas, and they still gloried in their paternity. It is probable that the first explorer of the lower Mississippi River, the unfortunate La Salle, landed at this spot on his downward trip to the sea. It is a disputed point as to where was the location of the first fort. Some say it lay back of the town, while others say it was established at Ellis's Cliffs. In 1713 Bienville established a fort and trading-post at this spot. The second, Fort Rosalie, or rather the broken profile of it, is still visible. It is gradually sinking, by the earth being undermined by subterranean springs, and in a few years not a vestige of it will be left. Any one now standing at the landing can see the different strata of earth distinctly marked, showing the depth of the artificial earthworks.

One hundred and twenty miles above Natchez is the important city of Vicksburg, lying also in the same State. This fine place is situated on the Walnut Hills, which extend for two miles along the river and rise to the height of five hundred feet, displaying some of the finest scenery on the lower Mississippi. The city was founded by a planter named Vick in 1836, and some of his family are still living in the place. It is regarded as one of the most attractive cities in the South, and is the chief commercial mart of this portion of the river-valley. It was here that the Confederates made their last and most desperate stand for the control of the river. The place was surrounded by vast fortifications, the hills crowned with batteries, and under General Pemberton it made a gallant defense. But, after a protracted siege, it capitulated to General Grant, who thus "broke the backbone of the rebellion and cut it in twain." Near Vicksburg is the largest national cemetery in the country, containing the remains of sixteen thousand soldiers. Vicksburg is about equidistant between New Orleans and Memphis, the latter city being a very important mart. About one hundred and sixty miles below Memphis the Mississippi crosses its valley westward to meet the waters of the Arkansas and White Rivers. The Arkansas is a great river, two thousand miles long, for eight hundred miles of which it is navigable by steamers. It has its rise in the Rocky Mountains, and is only second to the Missouri as a tributary of the Mississippi. Between the latitude of the mouth of the Arkansas and that of Baton Rouge lies the great cotton-growing region in the valleys of the Mississippi and its tributaries, and it is this fact which gives significance to the life and characteristics of the whole region. Lack of space prevents our making any further detailed mention of cities and towns in the valley of the lower Mississippi, but this chapter can not be properly closed without some account of the cotton-culture, the great Southern staple, a belief in the royalty of which, both in agriculture and politics, had so much to do with the inception of "the late unpleasantness."

Cotton-planting begins about the first of April, and, from this time to the gathering of the crop, it demands constant attention, even as the sugar-cane does, and unlike the staple crops of the North, which give the farmer considerable intermissions. A variety of dangerous insects molest the young cotton-plant, and the care of watch-

ing against these is very great. Nothing can be more striking to the eye than the appearance of a cotton-field of large extent when the snowy globes are ready for picking, and the swart workmen with sacks on their shoulders wander between the rows culling their fleeces. From the very beginning, when the plant first appears above the ground, it is beautiful. In June, when the blossoms change their color from day to day, a cotton-plantation looks like a great flower-garden. In the morning the blooms are often of a pale straw-color, at noon of a pure white, in the afternoon of a faint pink, and the next morning of a perfect pink. This is the case, however, only of the upland cotton, the Sea-Island product always remaining a pale yellow. When the flowers fall away and the young bolls appear, the negroes have to watch



Gathering Cotton.

with great care for the appearance of the cotton-worm—a deadly enemy to the plant. There are many varieties of these worms, and they breed with astonishing rapidity, sometimes cutting off the entire crop of some districts. There is a popular belief that these worms appear at intervals of three years in the same district, and that their greatest ravages occur every twenty-one years. They attack no other crop but cotton, but against this they wage the most devastating war. The planters build fires in the fields about the time the moths begin to appear, hoping thus to destroy the parent insect. If they accomplish this they prevent the appearance of the second and third broods, and thus limit the ravages of the worm; but the remedy is rarely undertaken soon enough. Another insidious foe is the boll-worm moth, a tawny creature,

which in the summer and autumn evenings hovers over the cotton-blooms and deposits a single egg in each. In three or four days the worm comes out of the egg and eats its way into the heart of the boll, which falls to the ground, but not before the worm has attacked another boll. Plantations have sometimes been so devastated by these pests that they seemed as if a blast of lightning had scathed them, the bolls having been completely cut down.

During the picking-season, which begins in September, plantation-life is busy and merry. In these seasons, in addition to the regular force, help is recruited from the multitude of negroes who wander from plantation to plantation like the hop-gatherers or the harvest-hands of the West. By the middle of October the season is at its height. Each laborer is expected to pick from two to three hundred pounds of cotton a day, and as fast as the fleeces are picked they are carried, either in wagons, or in baskets on the heads of negroes, to the gin-house. There, if the cotton be damp, it is dried in the sun, and then the fiber is separated from the seed, to which it is quite firmly attached.

Nothing can be simpler yet more efficient than the ordinary cotton-gin, which still preserves the main features incorporated by Whitney, the first inventor. It may be justly said that this man did more than any other one to perpetuate slavery, for it was the invention of the cotton-gin which made slavery enormously profitable. A series of circular saws are set on the main cylinder, and the latter is brought into contact with a mass of cotton separated from it by steel gratings. The teeth of the saws, playing between the bars, catch the cotton and draw it through, leaving the seeds behind. A set of stiff brushes underneath the saws, revolving on another cylinder moving in an opposite direction, removes the lint from off the saw-teeth, and a revolving fan, producing a rapid current of air, throws the lint to a convenient distance from the gin. The ginning of Sea-Island cotton, as practiced in South Carolina and Georgia, requires the use of two fluted rollers, made of wood, vulcanized rubber, or steel, and coming nearly together. The rollers move in opposing directions and draw the cotton between them, while the seeds can not pass through for want of space. On small plantations cotton is ginned by horse-power, but on the great estates steam-power is used. There are many enterprising men who, however, set up cotton-gins in some central location, and to them flock all the small cultivators, black and white, who raise from one to ten bales of cotton. This division of labor, which has previously been mentioned in reference to the sugar-cane culture, can not but have a good effect in increasing the acreage of cotton, and enabling many to work for themselves who previously were obliged to work for others. The small farms in the South are continually increasing, and promise great things for Southern prosperity. The negro, with his peculiar vices of idleness and lack of care for the morrow, does as little as possible, and saves nothing as long as he works, either on shares or for wages. But, if he toils for himself, it may be assumed that self-interest will go far to restrain, if not to extirpate, his radical faults. After the cotton leaves the gin it passes to the press, where it is packed into bales. On well-ordered lands the picking is all over by Christmas, and

then planters and laborers alike give themselves up to the joys of the holiday season.

Such are some of the sights and suggestions of the valley of the lower Mississippi, a region of our country full of picturesque and industrial interest. Previous to the late civil war the knowledge of it on the part of a large majority of Northern men was vague, and he who had traveled thitherward was regarded as a marked man. But if our four years' conflict carried with it much that was dreadful, it was not without its compensations in many ways. One of these compensations is, that it has caused the men of the North and the men of the South to feel a much deeper mutual interest, and to increase the intimate knowledge which one section has of the other. So to-day the Mississippi Valley and the other low countries of the South seem as near to the New-Englander as do the cities and prairies of the great West, and not closed to his sympathy.



A Planter's House on the Mississippi.



The Ohio River, below Pittsburg.

THE OHIO AND UPPER MISSISSIPPI.

The beginning of the Ohio at Pittsburg—Early history of the river—Characteristics of the river and its navigation—The interesting towns on its borders—Ohio and Kentucky—The early romance of Kentucky history—Cincinnati, the "Queen of the West"—The city of Louisville—The junction of the Ohio and Mississippi—St. Louis and its more astonishing features—The mineral wealth of Missouri—The upper Mississippi—Its peculiarities as distinguished from those of the lower river—Rock Island and Davenport—The beautiful scenery of the river—Quaint Dubuque—La Crosse—Features of river-navigation—Trempealeau and Lake Pepin—St. Paul and the State of Minnesota—Head-waters of the river.

THE early French explorers were so much delighted with the smoothly flowing, gentle Ohio River that they called it "La Belle Rivière." This descriptive term, so well befitting the stream, is the equivalent of the Wyandotte name, O-He-Yo, which means "Fair to look on," and thence the English name is derived. The characteristics of the river are individual. It flows mildly along its entire length, and no busy, bustling mills and factories fret its waters, and pour their poisonous refuse into its current. But it has a busy life of its own, nevertheless, and it carries the burden of an important inland commerce. Its entire length is a little more than a thousand miles. It flows among the coal and iron mines of western Pennsylvania; it ripples serenely around the mountains of West Virginia; and laps the rich corn and

wheat fields of Ohio. Bending northward toward Cincinnati, it embraces in a long curve the fertile blue-grass meadows of Kentucky, and finally stretches in a long sweep toward the southwest, skirting the southern borders of Indiana and Illinois, receiving on the way the turbulent waters of the two mountain rivers, the Cumberland and Tennessee; and at last mixes its waters with the Mississippi at Cairo. This noble river suggests the German ideal of a life of effective worth, "without haste, without rest"; for its serenely flowing stream is busy with a most important function in our inland navigation.

The river is formed from the junction of two rivers, the Alleghany and the Monongahela, the former a clear mountain river, and the latter a turbid yellow stream. The two unite at Pittsburg to make a water-course which, before it is absorbed in the Mississippi, receives seventy-five tributaries, forms the boundary line of five States, and shows the smiling faces of a hundred islands interspersing its stream. The shores are full of contrast. Now, one sees round-topped, green hills, now fat, rolling fields of grass and grain, now abrupt steeps, where the original forest remains in all its primeval density and wildness, even as it appeared to the first explorers. The river so bends and twists that it is knotted like a tangled silver thread over the country; every turn giving a charming new view. In the early spring, when the face of the country is green with verdure and enameled with flowers, Ohio River travel is very charming for one who is in no great haste. The steamboats, which are all stern-wheelers, go slowly up and down, like floating summer birds, whistling to each other for the channel, according to the load. The crews are motley, and the blacks and whites work together on terms of perfect good-nature and equality. The leisurely way in which everything is done extorts the admiration of the Northern man, accustomed to a complex and energetic system of business, where every detail is rigidly administered.

As the Ohio steamboat rounds a bend, there appears on the bank in the distance a man who signals with his hat. The engine slackens up, and the boat is slowly veered around to the bank, into which it runs its round snout. The lazy deck-hands thrust out a plank, and proceed to take their own time about transferring to the deck what freight there may be waiting. So the river-craft proceeds, picking up freight and passengers in a miscellaneous, slip-shod way, highly amusing to the unaccustomed eye. The ease with which these boats land is a strange feat. They often turn right into the bank, and the passengers may step on or off without the help of a gang-plank, though at the towns and villages on the river there is often a rude levee, or, at least, an old flat-boat moored against the shore, as a sort of rude wharf. These steamers, large, handsome, well-appointed for the comfort of the traveler, are almost all on the surface, as they necessarily draw but a few feet of water, owing to the shallowness of the river. When they run aground, a common occurrence, down drops a great beam, fastened with tackle like a derrick on the bow, and this, having been thrust into the river-bottom, the boat is pried off, and she resumes her course. If there is a fog on the river, the prudent captain ties up to the bank and spends the

night. Though the voyage from Pittsburg to Cincinnati is long, the passenger, if it be the spring of the year, when everything is green and glowing, does not regret it, as he glides along the skirts of Ohio farms, Virginia mountains, and the rich meadow-lands of Kentucky.

The mouth of the Ohio was discovered in 1680, but it was not till seventy years afterward that the French explored its unknown waters. In 1750 Captain Celeron, with a detachment of soldiers, took possession of the Ohio River Valley under orders from the Governor-General of Canada. This he did by depositing numerous metal plates along the shore, on which were engraved these words: "In the year 1750, we, Céléron, commandant of a detachment by orders of Monsieur the Marquis de Gallisonière, Commander-in-Chief of New France, to establish tranquillity in certain Indian villages of these cantons, have buried this plate on 'The Beautiful River' as a monument of renewal of possession of the river and its tributaries, and of all the land on both sides; inasmuch as the preceding kings have engaged it and maintained it by their arms and by treaties, especially by those of Ryswick, Utrecht, and Aix-la-Chapelle." Several of these interesting memorials have been dug up on the banks of the Ohio. The "beautiful river" and its tributaries, however peaceful and smiling their present look, were not always so, for continual fighting took place on their banks from the first grandiose proclamation of the French captain, down to the final defeat of the Indian tribes, banded under Tecumseh, by General Harrison. It was at Pittsburg that the French built Fort Duquesne in 1754, and it was near here that Braddock's defeat occurred the year following, and George Washington's name began to be famous. In 1758 the English retrieved their laurels, and renamed the captured Fort Duquesne after Pitt, Earl of Chatham, then the English premier. The little post held a precarious existence until Pontiac's conspiracy swept the country like a tornado. Fort Pitt escaped the fate of the other nine garrisons which fell before the Indian hero, through the gallantry of Colonel Banquet, who broke the Indian leaguer and brought supplies to the starving defenders. When the French gave up their claim to the Northwestern Territory, but a short time elapsed before the contest between the Americans and English arose. Fort Pitt was abandoned by the British, and so a post which cost that government sixty thousand pounds sterling, and which had been designed to perpetuate for ever the British Empire on the "beautiful river," passed into the hands of the insurgent colonies.

Pittsburg of to-day looks in the distance like a huge volcano, continually belching forth smoke and flames. By day a great pall rests over the city, obscuring the sun, and by night the glow and flash of the almost numberless iron-mills which fill the valley and cover the hill-sides, light the sky with a fiery glare. This great workshop of the modern Cyclops is one of the most important manufacturing centers of the country, and embodies our most valuable interests in iron and steel manufactures. In close proximity to the great coal and iron region, its opportunities for success in such branches of industry are without a peer. Though the suburbs of the city are beautiful and contain many charming residences, the aspect of the city itself is grimy and

gloomy, in spite of the noble business blocks and open, spacious streets. Anthony Trollope wrote, "It is the blackest place I was ever in, but its very blackness is picturesque"; and Parton writes in his coarse but graphic style, "It is all hell, with the lid taken off." The smoke and fires of Pittsburg make its most characteristic feature, but there is much to interest the visitor in the nature of the inland navigation, which centers at its wharves. Here may be seen steamboats and flat-boats which have come all the way from New Orleans and St. Louis, and the various water-craft which lie at the levee embrace every sort of river-boat.

The Ohio River starts in a northwesterly direction, and from the very outset the country along its banks shows signs of the highest cultivation, though here and there are mountainous tracts full of wildness and savagery. The queer old town of Economy, the home of a band of German communists, is about twenty miles from Pittsburg. Its ancient houses, tiled roofs, grass-grown streets, and profound quiet, are startling in contrast with the busy world outside. Here there are no marriages, no homes, no children, only ancient brothers and sisters, the last one of whom will inherit the riches of the community, which are very considerable. When the last brother is gone, the property will go, no one knows where.

When the river reaches the State of Ohio it makes a bend southward and skirts the queer little strip of land which West Virginia thrusts out, like a long, slender tongue, between Pennsylvania and Ohio. Over this narrow stretch of land there were years of protracted litigation after the Revolutionary War, for the land-titles were in a state of inextricable confusion. This arm of land is called the Panhandle. Wheeling, the principal city of the Panhandle region, is a flourishing place, which has grown steadily in manufacturing importance till it has become an important center. The Virginia side of the Ohio is wild and forest-clad, with abrupt mountains and tangled thickets. This, during the late war, was a favorite arena for guerrilla warfare and cavalry raids, and it was swept by both armies with merciless severity, though there were no grand battles fought. Passing down the Ohio, a few miles below Wheeling we find the charming town of Marietta on the Ohio side, said to be the oldest town in the State. The site is a picturesque one, in a deep bend where the Muskingum flows into the Ohio, and it was settled in 1787 by the New England Ohio Company, who took up one million five hundred thousand acres of land. When these New England pioneers landed from their flat-boat, the first thing they did was to write a code of laws, which they nailed up to a tree. This colony was established under very favorable auspices, and, though it languished for a while, it soon took a vigorous start. Fed by streams of fresh immigrants, it sent out detachments to other sections, and became the parent town of the State. It is singular that ship-building was once an important branch of industry at this Ohio town, and that a ship built here in 1806 sailed down the Ohio to New Orleans, thence to Liverpool, and thence to St. Petersburg. At the latter city it was seized by the port officials, under the plea that the papers must be false, as there was no such port in the world, and only released with considerable difficulty. A short distance below Marietta, and just above

Parkersburg, is Blennerhassett's Island, the romantic history of which is a very sad and pathetic story. Harman Blennerhassett was an Irish gentleman of large wealth and of good family, who bought the island, called by his name, in 1797. Here, with



The Ohio River, from Marietta.

his brilliant and beautiful wife, he lived in a little paradise which his wealth and taste enabled him to make. The island-home was widely celebrated for the attractions of its elegant hospitality. In 1805 Aaron Burr, by his blandishments, enlisted Blennerhassett in his Mexican schemes, according to which Burr was to become an em-

peror, and Blennerhassett a great grandee. The scheme collapsed, and the conspirators were tried for treason. Though Blennerhassett was acquitted, he was bankrupt in fortune and hope, and died a broken-hearted man, after years of further struggle, the victim of one of the most unscrupulous men ever produced by America. At Parkersburg, West Virginia, the Little Kanawha River flows into the Ohio, and here is the massive railway-bridge of the Baltimore & Ohio Railway Company, one of the finest structures of its kind in the United States. Some thirty miles below Parkersburg, the Big Kanawha pours its swift mountain-current into the Ohio River. Point Pleasant, which is at the mouth, was the scene of one of the bloodiest of Indian battles, where in 1774 a thousand Americans defeated the flower of the Western tribes under the leadership of the famous Cornstalk, and thus saved the Ohio and Virginia settlements from general massacre.

At the mouth of the Big Sandy River the Ohio touches the boundary of Kentucky, and thenceforward defines the northern limit of that beautiful State, dividing its rolling blue-grass meadows from the fertile corn-fields of Ohio. Stretching back from the river, on the Kentucky side, are magnificent parks. One sees no cultivated fields, no fences, and but few trees, except a few patriarchal clumps of great size here and there dotting the rich green expanse which stretches away a sea of luxuriant verdure. This is the unrivaled grazing-ground of America, and the wealth of the people is in their flocks and herds. Kentuckians justly boast that the finest horses and cattle are raised in the beautiful "blue-grass country," and it is pretty generally conceded that here is one of the rural paradises of the country. The name gets its meaning from the blue tint of the grass when in blossom. This district embraces some ten counties on the Ohio, stretching back into the interior as far as the Cumberland River; and here you may ride for miles over the richest green pastures, and continually pass herds of choice cattle and horses.

This beautiful region was once known as the "Dark and Bloody Ground," and was, in the early time of its settlement, covered in large part with a dense forest. It was a famous and favorite hunting-ground of the Indians, and here, long before Boone and his heroic companions came to found a new home for the white man, Indian traditions tells us, were fought some of the most savage battles between the Indian tribes themselves, anxious for supremacy of a land so gifted with everything that made life desirable—great profusion and variety of game, the purest and clearest streams abounding with fish, and an alternation of majestic forest with rolling meadow. Until 1767 no Anglo-Saxon had seen this fair region, but reports of it soon spread into Virginia and North Carolina. From the latter State in 1769 came Daniel Boone, one of the most celebrated of our early pioneer heroes, who took possession of the land and annexed it to the white man's domain. He remained three years during the first visit, and then returned to North Carolina to take his family back to the very hunting-ground he had discovered. Boone and the companions who soon joined him made good their stand against their savage foes, and their feats are among the finest things in the records of our border chivalry. The country is full of legends of

the grand old hunter and his exploits, and his name lingers on rocks and streams. As immigration poured into Kentucky, the old hunter and Indian-fighter, who had founded a commonwealth, became impatient of the too near approach of civilization. He was now alone in the world. So, shouldering his rifle, he went to Missouri, where he could exist far away from the converse of his kind. Here he died in 1820, at the age of eighty-nine. The people of Kentucky have since brought back the bones of the old pioneer, and interred them with honor on the banks of the Ohio, not far from the place he had for so many years made his home.



Vineyards on the Hill sides.

There is probably no State in the Union more agreeable in its climate, more favored in the richness and diversity of its soil, and in the distribution of mountain and stream, forest and open, than Kentucky. Not only is it famous for its production of fine stock, but it ranks very high as a wheat and corn growing State, and it need hardly be said that its whisky has a national reputation. Kentuckians are widely known for their hospitality and cordial warmth of disposition, and, as for physical beauty, no such fine race of men and women has been produced on the North American Continent. The largeness of *physique*, so generally characteristic of the people of Kentucky, has often been attributed to the limestone-water which is common throughout the State. This seems more than probable, as the blue-grass region, in which the depth and uniformity of the blue limestone stratum are more pronounced than elsewhere, is specially noted not only for its splendid race-horses and fine blooded cattle, but for the perfection of the human animals bred

there. A representative collection of Kentuckian men and women would probably display as noble physical examples of the human race as can be found in the world.

The two sides of the river, as one approaches Cincinnati, present a notable contrast, though each is beautiful after its kind. On one side are the luxuriant rolling parks and meadows of the blue-grass region; on the other, the hills and valleys of Ohio, the latter rustling with corn and wheat fields, the former covered with vineyards to the very summit. The grape-culture has become a very important interest in Ohio, and the manufacture of wine is now one of the recognized industries of the State. Millions of gallons of both still and sparkling wines are made annually, and sold all over the United States, some portion of the product even being exported to Europe. It was owing to the long and patient experiments of Nicholas Longworth, of Cincinnati, that the wine industry of Ohio became established on a permanently successful basis. The hill-sides on the north bank of



Cincinnati.

the Ohio River, with their sunny exposure and limestone foundation, seem to be admirably suited to the growth of the best wine-grapes. The State of Ohio yields now about one fifth of the wine product of the United States, and in quality it is perhaps, on the whole, better than the yield of any other State, though California and Missouri approach it nearly in this respect. The city of Cincinnati, known under the *sobriquet* of the "Queen of the West," was first settled two years after the Declaration of American Independence. It received its somewhat grandiose title from the unfortunate General St. Clair, whose name was for a long time a synonym for defeat and ill-luck in the Indian wars of the West. The name was given after the distinguished military order, now extinct, "The Cincinnati," to which most of our earlier celebrities belonged. This christening rescued the infant city from the threat of a burden which it would have been hard to survive—the name of *Losantiville: L*, the first letter of the river Licking, which flows into the Ohio on the Kentucky side; *os*, the mouth; *anti*, opposite to; and *ville*, a city. The name of the author of this ingenious

appellation has not survived the wrack of time. There is a sentimental story connected with the founding of Cincinnati. There were two other rival settlements on the river, and all were striving for the possession of the United States fort. North Bend had been selected, and work begun in laying the foundations of the post. It seems that the United States officer in command fell in love with the wife of one of the settlers, and very naturally the husband objected. So the latter moved out of North Bend, and went to Cincinnati to live. By a strange coincidence, the gallant soldier at the same time discovered that Cincinnati was a much more desirable place for a fort, so he transferred all his materials, and marched his command to the new site, thus establishing the beginning of the prosperity of the city, and leaving the unlucky North Bend to its fate. For a number of years, a continual series of difficulties with the Indians retarded the growth of the town, a fate it shared in common with most other leading Western settlements. In 1800 the population had grown to seven hundred and fifty, and in 1814 it was incorporated as a city. The building of the Miami Canal in 1830 was a very important epoch in the progress of the place, and during the next decade the increase of population was eighty-five per cent. The first of the many railways now centering in Cincinnati, the Little Miami, was finished in 1840, and so great a stimulus was thus added to the life of the city that in 1850 the population reached 115,436. Cincinnati by the last census was estimated at 255,708, which in connection with the suburbs would entitle it to about four hundred thousand people, estimated from its stand-point as a metropolis. It is one of the leading commercial centers of the West, and its principal industries are the manufactures of iron, furniture, boots and shoes, clothing, beer and whisky, machinery, and steamboats.

Cincinnati has a frontage of ten miles on the river, and extends back about three miles, occupying half of a valley bisected by the river, on the opposite side of which are the cities of Covington and Newport, Kentucky. It is surrounded by hills about four hundred and fifty feet in height, forming one of the most beautiful amphitheatres on the continent, from whose hill-tops may be seen the splendid panorama of the cities below, and the winding Ohio. Cincinnati is principally built upon two terraces, the first sixty and the second one hundred and twelve feet above the river. The latter has been graded to an easy slope, terminating at the base of the hills. The streets are laid out with great regularity, crossing each other at right angles, are broad and well paved, and for the most part beautifully shaded. The business portion of the city is compactly built, a fine drab freestone being the material chiefly used. The outer highland belt of the city is beautified by costly residences which stand in the midst of extensive and neatly adorned grounds, the favorite building material being blue limestone. The suburbs on the hill-tops are very charming and well worthy of a stranger's visit, rivaling, though entirely different in character, the suburbs of Boston. The streets of Cincinnati are attractive, but there is no great predominating avenue of travel, like Broadway, New York, or even Chestnut Street, Philadelphia. Many of the public buildings and private business structures,

however, will very well bear comparison with those of any other American city. One of the most interesting objects in this city is the Tyler Davidson Fountain, a gift by a public-spirited man of wealth. It stands on a freestone esplanade four hundred feet long and sixty feet wide. In the center of a porphyry-rimmed basin forty feet in diameter is the quatrefoil Saxon porphyry base supporting the bronze-work, whose base is twelve feet square and six feet high, with infant figures at each corner representing the delights of children in water. Bass-relief figures around the base represent



View on the Rhine, Cincinnati.

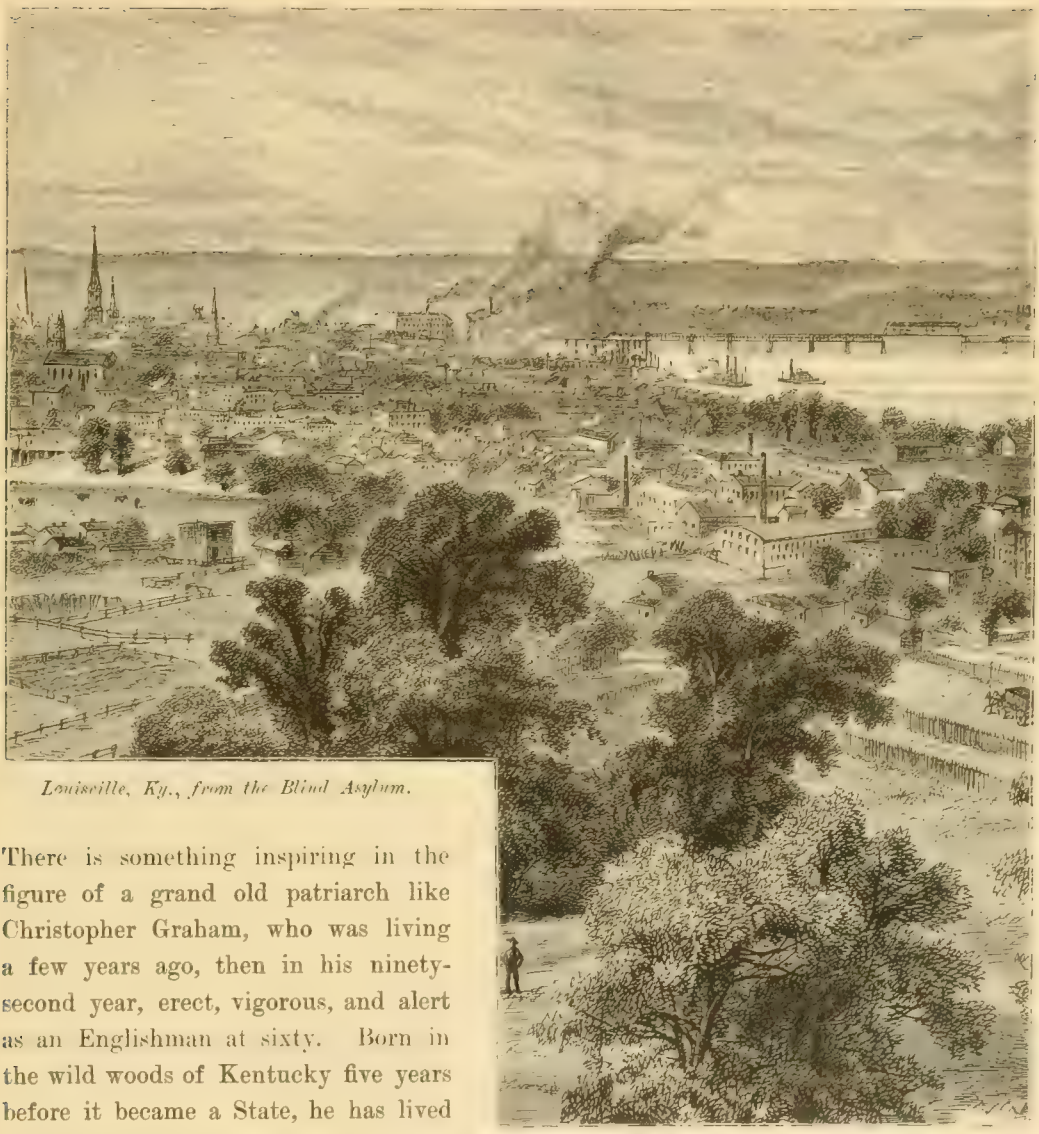
the various uses of water to mankind. From the upper part of the bronze base extend four great basins, and from the center rises a column, up whose sides vines ascend and branch at the top in palm-like frondage. Around this column are groups of statuary; and on its summit stands a gigantic female figure, with outstretched arms, the water raining down in fine spray from her fingers. The work was cast in Munich, and cost nearly two hundred thousand dollars. It plays during warm days from morning till midnight, and is always the center of an admiring or a thirsty crowd.

Those whose thirst needs to be quenched by something different from water find their steps drawn as if by some irresistible attraction to that portion of the city known as "Over the Rhine," the celebrated German river being represented by the Miami Canal. This, it need not be said, is the Teutonic part of the city. More than a third of the people of Cincinnati are either Germans or of German parentage, and "Over the Rhine," where they principally live, seems almost a foreign city to the visitor. No language is spoken here but German, the signs and placards are all in that language, and the aspect and atmosphere of the section are essentially foreign. The business, dwellings, theatres, halls, churches, and especially the beer-gardens, many of which are magnificent, all remind the European tourist of Germany. There are several fine parks in the city, the principal one called Eden, which contains two hundred and sixteen acres, beautifully laid out. The general impression of the city made on the mind of the stranger is that of a far more leisurely and serene life than is associated with such cities as New York and Chicago, where the blood of humanity seems to be at fever-heat from morn till set of sun, and each man straining to outdo his rival in the race of enterprise. Below Cincinnati, again, the river-voyager is greeted with the vision of beautiful vine-clad hills laid out in serried ranks, and laughing with the promise of the ruddy-blushing vintage. The borders of Ohio are soon reached, and succeeded by Indiana, the broad fields of Kentucky still spreading on the other side of the river.

The navigation of the Ohio presents much that is curious and interesting. It is obstructed by sand-bars and tow-heads, and the change in its depths is very remarkable, the variation being not less than fifty feet between low and high water. In early times the river was the safest highway, for here there was some chance of defense from a crafty and treacherous foe. So emigrant families purchased or built a flat-boat, and floated down-stream, closely hugging the Kentucky shore. These flats were made of rough planks fastened by wooden pins to an oak frame, and calked with tow. On reaching their destination the emigrants used the boat for house-building. As population grew, and with it trade, keel-boats and barges came into vogue, which could be propelled by sail if there was wind, or by long poles, the crew walking to and fro, and bending over the toilsome tread-mill. Like the boatmen of the Mississippi, those of the Ohio were a merry, warm-hearted, athletic, and somewhat pugnacious race, fond of love-making, dancing, and fighting. They talked a jargon half French, half Indian, and, when at night they drew up at the river-beach, the sound of a bugle summoned the girls and youths of the adjoining region for a frolic. Here, then, to the sound of a wheezing old fiddle, the merry company would often dance all night on the top of the flat-boat, and if in the morning there were a few broken heads, why, no one harbored any ill-will over the matter. These huge flat-boats still form an important feature of the river, doing much trade in a vagabond sort of way. The canal-boats and barges, which also enter so largely into the Ohio River craft, are propelled by tugs, and these screaming and puffing little monsters, specially in the vicinity of the larger towns on the lower part of

the river, may often be seen pushing a little flotilla up or down the stream. A night landing is always an amusing sight. The negroes do most of the work, like the roustabouts on the Mississippi boats, and enliven toil by their amusing antics. In drawing up to a stopping-place, an iron basket, filled with pine-knots, is swung over the side, at the end of a pole, and then the merry blackamoors dance down the plank with uncouth step and ringing laugh, burdened with the freight to be landed.

The city of Louisville, the most important place in Kentucky, is a large, cheerful town, and the pride of the State. It is located on a site of great excellence, at the Falls of the Ohio, where Beargrass Creek enters the river. The hills which line the river through the greater part of its course recede just above the city, and do not approach it again for more than twenty miles, leaving an almost level plain about six miles wide, and elevated about seventy feet above low-water mark. The falls, which are quite picturesque, may be seen from the town. In high stages of the water they disappear almost entirely, and steamboats pass over them; but, when the water is low, the whole width of the river has the appearance of a great many broken cascades of foam making their way over the rapids. To obviate the obstruction to navigation caused by the falls, a canal, two and a half miles long, has been cut around them to a place called Shippingport. It was a work of vast labor, being for the greater part of its course cut through the solid rock, and cost nearly one million dollars. The city extends about three miles along the river, and about four miles inland, embracing an area of thirteen square miles. Louisville was settled by thirteen families, who accompanied Colonel George Rogers Clarke in his expedition down the Ohio in 1778, and to be descended from one of these Virginian pioneers is the highest brevet of honor for any Louisvillian. The town was named Louisville in 1780, in honor of the French king, whose troops were assisting the American colonies in their struggle for independence. In 1828 the town had grown to have ten thousand inhabitants. The city is built on a sloping plane, seventy feet above low-water mark, with broad, fine streets lined with imposing warehouses near the river, and beautiful residences farther back. The city has a peculiarly Southern aspect as compared with Pittsburg and Cincinnati, which are not very far north in latitude. All the business and social characteristics speak of people essentially different from those we have before met on the Ohio. Most of the residences are set back from the street, with large, beautifully ordered lawns in front, rich with flowers and shrubbery. The streets are lined with shade-trees, and awnings may be seen at nearly every window, while the easy-going, leisurely carriage of every citizen bespeaks a mind eminently contented with himself, his city, and his State. Life in Louisville is socially very agreeable. "Nowhere in the country," says a recent writer on the South, "are frankness and freedom of manner so thoroughly commingled with so much of high-bred courtesy. The people of Kentucky really, as Tuckerman says, illustrate one of the highest phases of Western character. They spring from a hardy race of hunters and self-reliant men, accustomed to the chase and to long and perilous exertion. The men of Kentucky, while they are not afflicted with any peculiar idiosyncrasies, are intensely individual.



Louisville, Ky., from the Blind Asylum.

There is something inspiring in the figure of a grand old patriarch like Christopher Graham, who was living a few years ago, then in his ninety-second year, erect, vigorous, and alert as an Englishman at sixty. Born in the wild woods of Kentucky five years before it became a State, he has lived to see a mighty change pass over the Commonwealth where he cast his fortunes; and he delights to tell of the days when men went about their daily work rifle in hand, and when the State was constantly troubled with Indian incursions. Mr. Graham was long noted as the best marksman, with a rifle, in America, and has had in his eventful life a hundred adventures with Indian, guerrilla, and bandit. The product of a rough, and, in some respects, barbarous time, when shooting, swimming, leaping, wrestling, and killing Indians were the only exercises considered manly, he is to-day a gentle old man, busied with works of charity, and with the upbuilding of a fine museum of mineralogy in Louisville."

The trade of Louisville is very large. It is probably the most extensive leaf-tobacco market in the world, and in live-stock and provisions it is one of the most important

centers of the West. It is the great distributing market for the fine whiskies which are made in the State, the value of which amounts to many millions of dollars annually. It has also very thriving industries in pork-packing, the manufacture of iron, leather, furniture, beer, cement, agricultural implements, etc., and since the removal of the incubus of slavery it has grown in population, thrift, and wealth, in an astonishing degree.

From Louisville to Cairo the Ohio flows through a fine, open country, much the same on both sides of the river. Noble farms and evidences of great prosperity greet the eye at every turn, and there is little to narrate of its rich and thriving sameness. At Cairo, Illinois, the Ohio River pours its waters, having skirted the southern portion of this State for not less than fifty miles, into those of the mighty Mississippi.

At this place we are at the southernmost point of Illinois, a low, uninviting city at the confluence of two great streams. The city was founded with the notion that it would be a great commercial center, and large sums of money were spent in improvements, mainly in the construction of levees to protect it from inundation. But these anticipations have largely failed, and Cairo has about as small a share of prosperity as could possibly fall to the terminus of a great railway, and the point of union of two of our most extensive highways of inland navigation. At a time when the Mississippi is very high, one standing on a Cairo house-top would see a very striking sight, and he might easily fancy he was looking out over a great lake extending as far as the eye could reach.

From Cairo to the confluence of the Missouri, the Mississippi river has many of the characteristics of the former stream. It is treacherous, swift, and turbid. Its capricious and tyrannical course is even more marked than below Cairo. It is for ever making land on one side and tearing it away on the other. The farmer on the alluvial bottom sees with dismay his corn-fields diminish, year by year acres eaten up and carried away by the dark and implacable current. The pilots complain bitterly of the constant changes in the channel, which are often difficult to detect.

What is known as the upper Mississippi properly begins or rather ends a few miles above St. Louis. Why the Missouri and the Mississippi Rivers should have two appellations it is difficult to understand. It is the Missouri which furnishes the great volume of the river, and the upper Mississippi which should rather be regarded as the branch—the mere confluent. The grand Missouri River, which is merged in the "Father of Waters" twenty miles above St. Louis, rises near the boundary of Montana and Idaho, among the Rocky Mountains, and flows twenty-nine hundred and eighty-eight miles before it meets the upper Mississippi. It is navigated as far as the mouth of the Yellowstone River, on the border of Dakota and Montana, but it may be ascended by very light-draught boats as high as the Great Falls, almost at the very base of the mountains. The Missouri receives all the great rivers which rise on the eastern declivity of the Rocky Mountains, with the one exception of the Arkansas. The area which it drains is estimated at five hundred and eighteen thousand square miles.

But if the Missouri contributes a far greater volume of water, and is geographically a more important stream than the upper Mississippi, the latter has claims on the lover of beauty which are not surpassed by those of any river in the known world. It shares with the Hudson the supposititious credit of being an American Rhine, though those who have seen all these celebrated streams assert that the German river can not compare with either of its American rivals in natural beauty and picturesqueness.



The Upper Mississippi, near St. Louis.

While De Soto was the first to discover the lower Mississippi, the first white men to reach the northern part of the river were the adventurous Frenchmen Père Marquette and the trader Joliet, in 1673. No settlement, however, was made on the site of St. Louis till a period not far preceding the Revolutionary War. In 1762 a grant was made by the French Governor-General of Louisiana to Pierre Laclède and his partners, comprising the French Fur Company, to establish trading-posts on the Mississippi, and two years later the principal post was established at the junction of the Missouri and upper Mississippi, and christened St. Louis. In 1803 Louisiana was ceded to the United States, and in 1812 all that portion lying north of the thirty-

third degree of latitude was organized as Missouri Territory. The city of St. Louis was not incorporated till 1822. Like New Orleans, though in less degree, St. Louis bears very distinct memories of its French ancestry and foundation in the character of its people; and its creole element, among which there is much hereditary wealth, plumes itself on its genealogy with haughty exclusiveness. The city is perched high above the level of the river, on the west bank, and is built on three terraces, the first gently sloping back for a mile to a distance of about one hundred and fifty feet above the stream. Back of the third terrace the surface spreads out in a broad and beautiful plain. The corporate limits of the city extend eleven miles along the river and about three miles back from it, making an area of twenty-one square miles. The growth of St. Louis has been steady and remarkable, yielding in this respect only to Chicago among American cities. The first census, taken in 1764, gave 120; in 1811 it only reached 1,400; in 1850 it amounted to 74,439; in 1860, to 160,733; in 1870, to 310,864; and in 1880, to 350,518. So St. Louis is to-day the sixth of the United States in population. The older streets of this city are narrow, but the new avenues are wide and handsome, and lined with splendid residences. The public buildings are imposing, the warehouses spacious, and the public parks very attractive, though small. Among the notable places are Shaw's Garden, with its extensive botanical garden and conservatory, and the Fair-Grounds, the latter being made the object of special care and cultivation, and measurably supplying the lack of a large public park.

As the natural commercial entrepot of the Mississippi Valley the commerce of St. Louis is very large, the chief articles of receipt and shipment being breadstuffs, live-stock, provisions, cotton, lead (from the Missouri mines), hay, salt, wool, hides and pelts, lumber, tobacco, and groceries. St. Louis is the first city of the Union in the manufacture of flour. Vast as are its commercial interests, however, the prosperity of the city is chiefly due to its manufactures, in which it is surpassed by a few cities only. St. Louis increased the value of her manufactured products from twenty-seven million dollars, in 1860, to more than one hundred million dollars in 1870; and in 1874, again, the latter amount was more than doubled. The complete census returns of 1880 will probably show an equally significant advance since. St. Louis promises to be a most dangerous rival to Pittsburg in steel and iron manufactures. Enough good iron can be produced from Missouri ores and Illinois coal to supply the wants of the whole United States; and it is claimed by the people of St. Louis that pig-iron can be produced for less money in Missouri furnaces than in any other part of the country. This fact, of course, gives the St. Louis iron and steel manufactures a great advantage.

A principal object of interest for the stranger is the great St. Louis Bridge across the Mississippi River, which may be justly regarded as one of the notable triumphs of American engineering. It was designed by Captain James B. Eads, having been begun in 1869 and completed in 1874. It consists of three spans, resting on four piers. The piers are composed of granite and limestone, and rest on the bed-rock

of the river, to which they were sunk through the sand from ninety to one hundred and twenty feet by the use of wrought-iron caissons and atmospheric pressure. The center span is five hundred and twenty feet, and the side ones are each five hundred feet in the clear; each of them is formed of four ribbed arches, made of cast-steel. The rise of the arches is sixty feet, sufficiently high to permit the passage of steamboats at all stages of the water. The bridge is built in two stories; the lower one containing a double car-track, and the upper one two carriage-ways, two horse-car tracks, and two foot-ways. It passes over a viaduct of five arches (twenty-seven feet span each) into Washington Avenue, where the lower roadway runs into a tunnel four thousand eight hundred feet long, which passes under a large part of the city, terminating near Eleventh Street. The total cost of the bridge and tunnel was over ten million dollars. It is estimated that the annual saving to St. Louis by the facili-



St. Louis.

ties for transportation accorded by the bridge will amount to a million dollars. Before the bridge was built, the levee on either side of the river was a kind of pandemonium. An unending procession of carts and wagons was always forcing its way from the ferry-boats up the bank to the streets of St. Louis, the tatterdemalion drivers for ever swearing at the kicking and restive mules. These wagons on busy days were surrounded by hordes of incoming Texas cattle, which, wildly tossing their horns, objected to entering the gangways of the ferry, and often tossed their tormentors in the air; and troops of mud-bespattered swine, numbers of which, constantly escaping, would be pursued by the enraged horsemen employed to herd them, for block after block. Added to this indescribable tumult were the lumbering wagon-trains of iron and copper, making their way to the boat; throngs of black loungers singing rude plantation songs; the nameless tide of immigration scattered about through all the

adjoining saloons and bar-rooms; and the gangs of roustabouts rolling boxes, barrels, hogsheads, and bales, from morning to night.

On the East St. Louis side of the river the crowd awaiting transportation was always of the most motley sort. Here might be seen the quaintly attired German immigrant and his family; the stalwart and bearded Texan drover, frowning contempt at the sprucely dressed people who, mayhap, were having a sly laugh at him; poor whites from the far South, rifle in hand, looking open-mouthed with amazement at the extent of brick and stone walls beyond the river; excursion parties and tourists standing amid piles of luggage, baskets, hampers, etc.; United States troops on the march for some remote frontier post; smartly dressed commercial travelers from Northern and Western cities, vigorously smoking their cigars to kill the complex odors of a miscellaneous crowd; and the hundreds of negroes who enter into every wharf-scene of a Southern city—all furnishing amusing study for the curious spectator. East St. Louis is a famous place in one particular. Its alluvial acres, which the capricious river so often overflowed, furnished, in the language of Sir Lucius O'Trigger, "as pretty a piece of turf as any gentleman could wish for." Here was fought in the olden times many a sanguinary duel, and its *sobriquet* was once "Bloody Island." These associations are now of the past, and East St. Louis is a prosperous town, with a long stretch of busy wharves and huge grain-elevators.

The scene at the St. Louis levee is very interesting to the stranger. Here one gets a good idea of the extent and vivacity of the river-trade, when he sees something of the multitude of boats, barges, and rafts which the Father of Waters carries on his ample breast. Every conceivable variety of river-boat grates its keel against the St. Louis levee—the floating palace, the strong flat-bottomed Red River packet, the cruisers of the upper Mississippi and of the turbid Missouri, the barges in long procession laden with iron, coal, lead, and copper; and the huge cars of the Transportation Company, each one capable of receiving a hundred thousand bushels of grain; while rafts of every size and shape are scattered about like chips over the giant stream. Nearly three thousand steamboat arrivals are annually registered at the port of St. Louis.

The journey up the Mississippi from St. Louis is delightfully made in one of the capacious steamboats plying between that city and St. Paul. We find the scenery immediately above St. Louis by no means picturesque, though it is serene and pleasing, full of suggestion of pastoral charm. One thing the eye instantly observes is the difference of the color of the water, its brilliant deep blue, as compared with the ochre-colored fluid below the entrance of the Missouri. About twenty miles above St. Louis, and three miles from the junction of the Missouri, on the Illinois shore, is the city of Alton, perched on a limestone bluff two hundred feet high. It is said that this rock was once covered with Indian paintings and inscriptions, but the effect of time and weather has been to efface them. The islands which begin to thickly dot the river have a look of greater age, and are covered with a profuse vegetation and fine trees instead of being mere mud-banks, which are made and unmade every year. The bluffs become more numerous as we proceed up the river, until Keokuk, Iowa,

is reached, where the steep bank has the appearance of a range of hills with ravines between. The river has now passed beyond the Missouri State line, and skirts Illinois and Iowa. But a few words about a State of almost unmatched natural resources will be appropriate before sailing away to the more northerly Mississippi region.

The climate of Missouri is mild and invigorating, the face of the country for the most part high and undulating, and in places rugged and mountainous. Along the banks of both the Mississippi and the Missouri there are rich alluvial lands, which pass as one leaves the river valleys into rolling prairie of the richest soil for agricultural uses. All kinds of fruits and grains flourish luxuriantly on the farm-lands of this State, and invite the immigrant by a promise of lavish return. Between the two great river valleys, the country is diversified by the valleys of the subsidiary rivers and intervening tracts of beautiful uplands, united with the valleys by gentle slopes. Thick woods occur for the most part on the water-courses with which the State is profusely supplied. The prairie-lands occupy about nine tenths of the lands of the whole State. Inviting as Missouri is in its admirable diversity of woodland and prairie for the purpose of agriculture, it is in her mineral deposits that her characteristic superiority rests. The iron, copper, lead, and coal beds of the State are practically inexhaustible, and out of them has already sprung a great industry, which is destined to be quadrupled in yield and value before many years have passed. The main iron-region of Missouri is situated in the southeastern and southern portion of the State, and the most of it is tributary to St. Louis. The most remarkable part of this mineral region is Iron Mountain, which is situated eighty-one miles southwest of St. Louis, and connected with it by rail. The mountain is only two hundred feet high, but the wonder is that it is a solid mass of the finest iron-ore, which runs far down into the bowels of the earth. The whole region around is rich in mineral. A few miles below Iron Mountain rises Pilot Knob, which is quite a stately peak, towering far above its brethren of the Ozark range. It is claimed that the county in which Iron Mountain and Pilot Knob lie contains more iron than any other area of equal extent in the known world. The stores of coal match those of iron. It was long ago estimated that the State had an area of twenty-six thousand miles of coal-beds between the mouth of the Des Moines River and the Indian Territory, and very extensive coal-fields have been lately discovered. In lead, Missouri can also boast a magnificent richness of resources. In 1872 the production was twenty million pounds, and since that time the production has been nearly doubled. The area of the lead-region comprises nearly seven thousand square miles. Besides the extensive copper-mines there have been made also, recently, large discoveries of zinc, cobalt, nickel, tin, manganese, and marble. In the subterranean treasure-house of Missouri the precious minerals do not seem to abound, but their absence is more than compensated by the wonderful richness of the useful metals.

Leaving this cursory survey of the mineral resources of Missouri, let us proceed on our way up the river again from Keokuk, which is just over the Iowa line. Opposite Keokuk in Illinois is the city of Warsaw, and close to Warsaw the Des Moines

River falls into the Mississippi, causing what are known as the Des Moines Rapids. These sometimes cause hindrance to freighting-vessels, but the packet-steamers pass through without difficulty. Mississippi scenery at this point begins to give promise of the charm for which the upper river is famous. The water is deep blue, and glides along with a placid, lazy flow, in marked contrast to the swift rush of the lower river. Acres of lily-pads begem the surface with their green leaves and rich blossoms. Groups of islets, fringed with rushes and clad with tree and grass, diversify the stream which winds in and out between with a languid ripple, as if reluctant to leave these fairy resting-places. The bluffs are striking, sometimes majestic in their shape and elevation, and in early morning and late afternoon cast long shadows far out over the serene waters. About seventy miles above Keokuk the Iowa River joins the main stream, and fifty miles farther north again we reach Rock Island, the largest of the Mississippi islands. It is three miles long, and has an area of about a thousand acres, a portion of it being covered with fine forest-trees. On this island are government fortifications and arsenals of a formidable character. The old arsenal, which still remains, was the headquarters of General Scott during the Black Hawk war. The new buildings are of an enduring and substantial character, and the whole island has been laid out with so much skill and taste that it almost rivals West Point as a charming military station. On the east or Illinois bank is the city of Rock Island, on the west or Iowa side is Davenport, both beautiful little cities. They are connected with the island by means of bridges, through which steamers pass by means of draws. The rapids in the river here are quite dangerous, and the bridge is an additional obstacle to navigation, which causes much complaint on the part of the steamboat-men. There was a time when gangs of desperadoes were hired to burn the bridges as fast as they were renewed, and they then had to be guarded by United States soldiers. It is probable that ere long the railroad companies will co-operate with the two cities in building a great bridge, with cast-steel spans not less than five hundred feet long.

The shores of the river for many miles above and below Rock Island present the same characteristics on both sides of the stream. The whole surface of Iowa is rolling and undulating, rising here and there into hills of considerable height. Illinois, on the other hand, is only broken and undulating on the Mississippi, extending perhaps fifty miles back from the river, and near its Wisconsin border. The middle and southern portions of the State are flat prairie, presenting to the eye a great sea of waving verdure from the first of May to the first of November. These rich lands are the garden of the West, but they offer a very monotonous aspect. Yet they are not without a striking sublimity of their own, for the ocean itself does not convey a more vivid notion of boundless space. This will not long, however, satisfy the mind, for change and diversity are essential to that cheerfulness of impression which is the most important element in natural beauty. This suggestion is perfectly reached in the scenery of the Mississippi River, and the glimpses we get of the outlying country on both banks.

Above the Rock Island rapids the bluffs become less hilly and more like Cyclopean walls. The enormous masses of stone, stratified like masonry, impress the fancy of the river voyager, and one is forced to think that time was when the level of the



Eagle Bluff, near Dubuque.

river was the same as that of the bluffs, but that as they were gradually upheaved the stream cut its way down, as if a tremendous saw. The Mississippi now for a long distance averages a width of about two miles, and this expanse is studded with islands infinitely varied in form and effect of beauty. On a fine summer's day the

clear, glassy surface reflects in its cool shadows every indentation on the face of the bluffs, every streak of color, every tuft of grass that grows in a crevice, every bush on the slope of the base, every tree on the summit. Beautiful effects of color and of light and shadow continually delight the eye.

Just below Dubuque, which is three hundred and sixty miles above St. Louis, the bluffs begin to be castellated and to assume very striking and suggestive shapes, out of which the fancy easily makes quaint likenesses. At Dubuque the bluffs are nearly three hundred feet high, but they do not fall sheer to the water's edge. At the base there is a broad level about sixteen feet above the river, and on this plateau are built all the business-houses, hotels, factories, etc. Above, connected with paths that have been cut through the solid limestone, are the streets of the dwelling-houses. The approaches to these upper houses are mostly by stairs so steep that they might almost be called ladders, a method of street transit almost unexampled among American cities. But when one has climbed these steps a most delightful view is opened to the eye. At the feet of the spectator is the quaint city with its absolute confusion of lines, its walls with modern stairways or steps hewed in the rock, its queer muddle of houses and bluffs reminding one of an old Italian city built on the vine and orange clad terraces of a mountain-slope ; far away over the broad and shining river rise the bluffs of the eastern shore, with their sharp contrasts of green verdure and glaring white, and beyond the hazy expanse of the prairie melting in the distance into the sky, which, blue above, becomes paler and paler till it becomes an absolute gray. Dubuque, which is the principal city of Iowa, is also the oldest, the original settlement having been made by John Dubuque, a French-Canadian trader, in 1788. Its permanent growth, however, did not begin till 1833, when the Indian title to the lands was extinguished, and four years later it was incorporated as a city. On the lower plateau are a number of fine buildings public and private, while the charming and picturesque residences on the heights above are such as would make them instantly noticeable, alike from their beauty of situation and the costliness and good taste of the structures. This city is the commercial center not only for an extensive grain and lumber region, but for the great lead-region of Iowa, Northwestern Illinois, and Southwestern Wisconsin, many valuable mines being within the city limits. Two important railways converge here—the Illinois Central and the Chicago, Dubuque, & Minnesota—and another road is now building which will largely add to the importance of Dubuque.

A short way above Dubuque is Eagle Bluff, a landmark for the river-pilots, rising five hundred feet high. Here the slope of the bluff so blends with the perpendicular rise that it seems like an enormous wall descending from the forest above to the water beneath. Sometimes the cliffs on this part of the river have been so changed by the action of water as to present those great sloping banks called downs in England, where a disintegration of the surface forms a thin soil on which a rich vegetation springs up, clothing them in green from top to bottom. When the landscape is tamed down by a thin, silvery mist, and a portion of the river is shut off from view,

fancy cheats the eye into the belief that the gleaming sheet of water is the beginning of a romantic lake among the hills. At times the upper Mississippi is noticeable for this lake-like appearance, owing to the comparative freedom of the stream from islands, while in other places beautiful green expanses diversify the surface of the water in great profusion.

Since leaving Dubuque the voyager has had the beautiful State of Wisconsin on his right, Iowa still being on the west bank of the river. The former state is unsurpassed for the gentle picturesqueness and charm of its scenery, and when better known it can not fail to be a favorite goal for tourists and travelers. The surface of the State is a high and rolling plain, at times hilly but never becoming mountainous. Wisconsin has on its west the Mississippi River and Minnesota; on its north, Lake Superior and the northern peninsula of Michigan; on its east, Lake Michigan; on the south, Illinois. So it will be seen that most of the boundary of Wisconsin is a water-line. The highest lands are those along the sources of the tributaries of Lake Superior, rising here to a height of eighteen hundred feet above the sea-level. From all the highlands there are slopes by which the water is drained off in rivers and lakes, with which important features of natural beauty the State is richly endowed. In addition to a number of important rivers, innumerable small streams water the surface, the waters, originating in springs and lakelets, being translucently clear. Many of the rivers, large and small, have very picturesque cascades and rapids, or run through narrow rocky gorges called "*dalles*." Almost all the Wisconsin streams offer splendid water-power, which is extensively utilized for manufacturing. But it is in her lakes that the picturesque characteristic of Wisconsin most impressively exists. These are very numerous in the central and northern portions of the State, and are from one to fifty square miles in extent, usually with high, cliff-like banks, and very deep water, swarming with the best game-fish. There are parts of Wisconsin so studded with lakes that it would be difficult to travel five miles in any direction without finding one. A kind of wild-rice grows in the shallower portions of these lakes, affording subsistence to innumerable water-fowl. Several very charming watering-places have sprung up among the Wisconsin lakes, which are much frequented by Western and Southern people. The rivers which pour into the Mississippi River present bolder scenery, though not more picturesque, than the lake-region: among these the Wisconsin and St. Louis are specially noticeable. The mouth of the Wisconsin River is broad, but the water is shallow and the channel obstructed by sand-bars clad with rank vegetation. The sloping bluffs are covered with trees and other vegetation to their very summit. All along the line of the Mississippi here, and up the interior rivers, are wheat-growing lands of the greatest richness. Wisconsin is one of the important wheat-growing States, and the cereal crops are distributed to market in two directions: the northern and eastern parts of the State find their outlet in Milwaukee and Chicago by rail or lake-propeller; the product of Western Wisconsin selects the broad expanse of the Mississippi as its avenue, and is carried by barge from the different towns on the river to Dubuque and St. Louis.



At the Mouth of the Wisconsin.

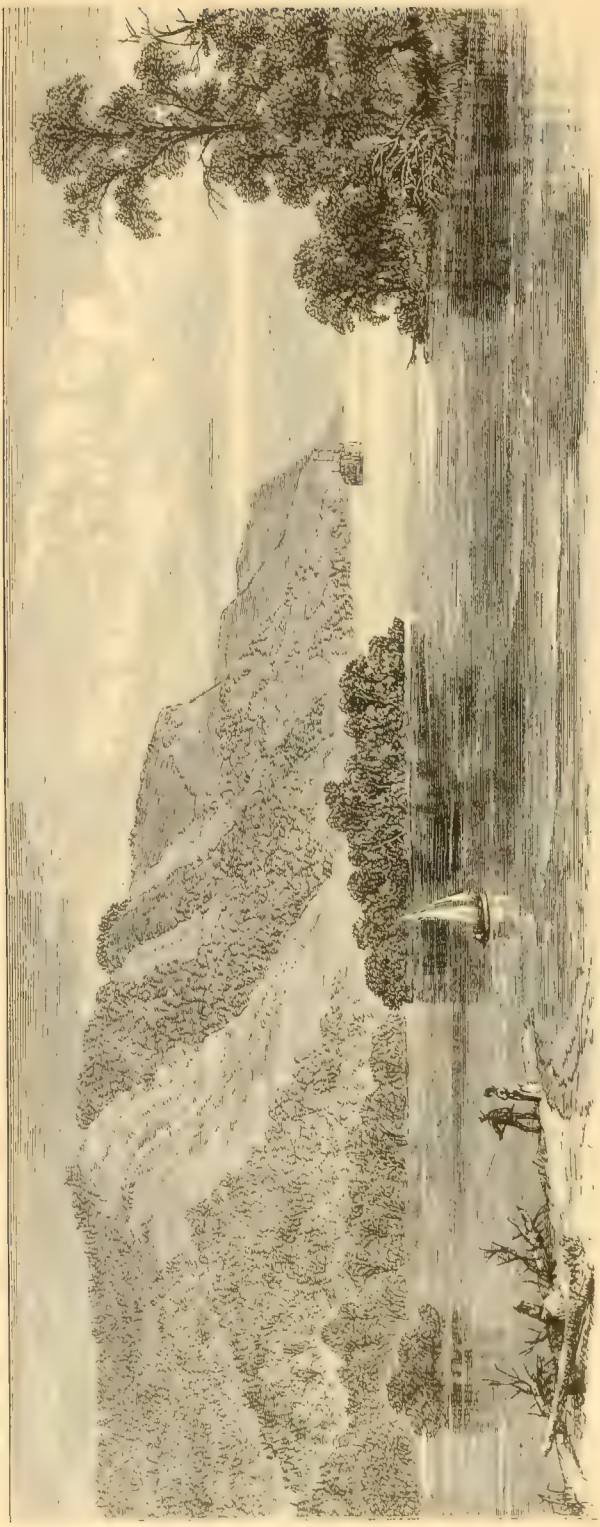
Near the mouth of the Wisconsin River is the city of Prairie du Chien, a thriving place, but not specially interesting; nor, in fact, is there any town of noticeable character till we reach La Crosse. But the river becomes more and more beautiful as we proceed northward, and the lover of nature does not regret the absence of large towns. The bluffs of the river now alternate from a yellowish-white when they are exposed to the full force of the summer sun, to a gracious green when in spots sheltered from exposure; shrubs and trees, and grass or moss, have planted themselves, or festoons of vines curl around the fantastic spires and jutting cornices of limestone. The variety of scenery, the wooded hills, and the limpid purity of the water, as clear as that of Lake Leman, conspire to make this part of the river difficult to rival. The bluffs alternate from massive wooded heights to long walls of limestone, with bases, and cornices, and bartizan towers, deep crypts, and isolated chimneys. Often from the green heart of a forest, a limestone pinnacle cleaves the air like a colossal alabaster needle; and then, again, there will be a series

of towers or donjon-keeps with festoons of vines hanging over them like banner-drapery. As we pass up the river with its constantly changing scenery, that delights the mind with always fresh surprises of form, tint, and perspective, we see grand forests coming right down to the brink of the stream through openings in the bluffs, and we expect every moment to behold the antlered head of a noble buck.

The city of La Crosse is at the junction of a little stream, built on a prairie which breaks the usual bluff-like formation of the river-banks. Here the Indian tribes, for hundreds of miles around, were wont to have their annual ball-playing, that game which the French called *La Crosse*, and which has given its name to the bustling Wisconsin city. The opposite side of the river is Minnesota, a State also great in its product of grain and lumber.

La Crosse is a station on the Milwaukee & St. Paul and Chicago & Northwestern Railways, as well as on three other minor routes; and many a tourist makes the tour of the upper Mississippi by steamboat from this point, for it is above La Crosse that the beauty of the river displays its most striking attractions. The boat arrives at this point at midnight, and during the summer season a great crowd is ordinarily brought in by the railway-trains to make close connection with the river-travel. The scene of transfer on the river, and the swinging off of the boat into the stream, constitute a picturesque and vivid experience.

"Only the most placid amiability," says a writer in "Appletons' Journal," "or the most imperturbable good-humor, is equal to this rousing at midnight when traveling, however uncomfortable the interrupted sleep. I have had divers experiences of it; have seen tired, sleepy, fretful, stolid, hungry, cold, querulous, impatient crowds making the hateful transit from one conveyance to another, but never saw better brigands or bacchanals in a picture than the company now leaving the cars for the upper Mississippi at La Crosse. Great torches were burning at each corner of the wharf; huge iron crates, mounted high in the air, filled with inflammable and resinous pitch-pine, which in combustion sent out a lurid light. The faces of the bewildered and disheveled passengers, reddened by the glare of those torches, might have served a Hogarth in drawing or a Rubens in color. We saw in the red light three tall white steamers lying at the wharf — great passenger and freight craft of the Mississippi, very unlike steamers built for Eastern rivers, and yet more unlike those in use on the ocean, so familiar to all the world since the Eastern exodus has come to be so universal. They looked like great floating arks, standing out against that background of impenetrable darkness, as mysterious and unfathomable as Tartarean gloom. Each steamer had at leeward two great torch-lights, two crates projecting over the vessel's sides into the midnight blackness. These showed us the negroes, in their scant costumes, bearing huge burdens of luggage or freight, and illuminated the long arcades of freight-holds on the deck. (Mississippi boats, being required to have shallow draught, are all built above water.) Beyond this we saw nothing. The black night and the black, sluggish water rebutted the lurid rays, and there seemed no power of refraction in the darkness beyond. It was only darkness made visible.



Scenery above La Crosse.

"When we were once on board, we were thoroughly roused from our sleepiness, and made oblivious of fatigue by the picturesqueness of the scene. We leaned far over the railing, watching the black stevedores, alternately red in the torch-light and dusky in the shadow, as they came and went with their burdens. They were crooning a characteristic song, with an elaborate chorus, which caught in its meshes the voice of every negro on the boats or on the shore. As the labor lightened, those on our boat, which was between the others, struck out boldly with the words, while from the steamers on each side of us came the refrain. When the time for separation arrived, the singing grew noisier and wilder, the chorus readier and louder, the men no longer busy keeping time with a heavy tramp. The boat going down the river was the first to depart. The distance between us widened; the chorus-singers, in their picturesque costumes, passed along beneath the gleams of our torch; the sullen waves of the black river rolled a few white crests, left by her wake, into the red light; the white steamer passed out of sight, and the voices of the singers died away in the distance.

Then, simultaneously with the other vessel, we left the wharf, parting company; the singers below grew louder and noisier, but the refrain came back softer and more and more indistinct. We watched it on its majestic course till the stately vessel was out of sight, till its red lights and its singing negroes were lost to eye and ear.



Approach to Tempelhaus.

"I have seen many rare night-scenes in traveling, and remember strange midnights. There was one, in a half-wrecked ship, lying on its side on Frying-pan Shoals, off Cape Fear; another, hemmed in by ice in the Susquehanna, off Havre de

Grace; a third, speeding on burning cars through the woods of North Carolina; a fourth, passing through flaming woods in Canada, with the story of Chicago's tragedy ringing in the ears; but, amid these and other vivid and startling recollections, comes this embarking from La Crosse on the steamer as one of the most weird, the most memorable of all night-scenes in travel. Going to Europe for romantic travel adventures has not seemed a necessity in my life. The one scene I have tried to paint would have furnished material for poet or painter."

Above La Crosse the valley of the Mississippi widens considerably, and the hills recede, leaving long slopes of upland covered with fine old trees. The river is studded with low islands, made of the alluvial washings from the banks, and mantled with a dense covering of scrub-oak and cotton-woods. The bluffs are in many cases six hundred feet in height, and of varied shape, but more often of the pyramidal form.

The fairy region of Trempealeau is one of the celebrated portions of the upper Mississippi, and is only eighteen miles above La Crosse. This is also sometimes known as Mountain Island, for its rocky height rises five hundred and sixty feet. The French *voyageurs*, whose nomenclature, scattered all over our Northwestern region, is full of poetry, gave it its musical and suggestive name, because it is a *mont qui tremp à l'eau* (mountain which dips into the water). Nothing can be more beautiful than the approach to this picturesque place. The river lies like a lake in the bosom of the hills, which are of the most varied beauty. The water sleeps below these bright-hued heights, its glassy breast giving back all the charm of the environing amphitheatre of hills. The islets that nestle around the huge form of Trempealeau are covered with sedge which waves in the air with the least puff of wind. The mountain is covered in many places with dense forests; and then there are extended spaces of barren rock, sometimes covered with minute lichen which gives the warm effect of red sandstone, sometimes dazzling white like marble. This mountain-island is one of the gems of the Mississippi, and furnishes a worthy study for the painter and poet, as well as for the man of science; and the effect is equally beautiful, whether seen from the river below, from the clustering islets at the foot of the island, or from the village of Trempealeau five miles above. Twenty-five miles above Trempealeau is another noted spot called Chimney Rock, which is near Fountain City. This peculiar mass of limestone on the right of the river is altogether detached, and has a very striking resemblance to an old ruined castle. It rises from a dense growth of trees, mostly maple, and at the base of the bluff there is a sort of natural terrace very broad and even, which is free from all vegetation or *débris*, and looks like the terrace of some noble old baronial home.

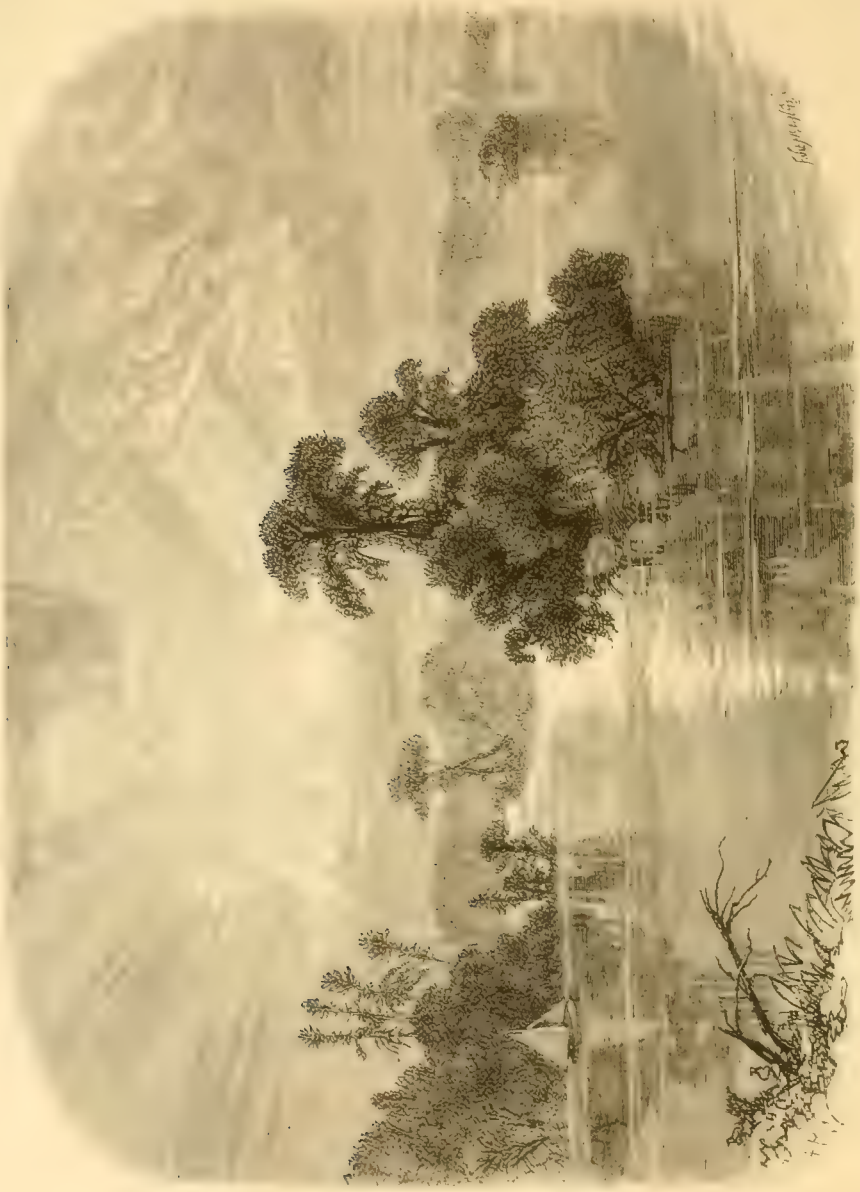
But all other portions of the river yield to Lake Pepin in the variety and perfection of the natural conditions which have made it so celebrated. Here the Mississippi swells into a great expanse of water from five to twenty-five miles in width. The water is very deep, and in the summer-time is so calm that the eye can never discern any sign of a current. So easily do the side-wheel steamers pass through the water that they appear to be moving through the air. As we enter Lake Pepin on



Lake Pepin.

the south, we observe a high rock-point on the left shore, looking like a sentinel guarding the entrance to a land of enchantment. In the mid-distance another promontory of high and menacing aspect juts out into the lake, hiding from view the sweep of the upper end, which here makes a bold curve to the eastward. The lake is surrounded by a superb amphitheatre of hills, many of which have an elevation of five hundred feet. Nearly every variety of form is suggested, some being square masses like the keep of an old castle; others are angular, others conical.

Here is the similitude of a pyramid, there the likeness of a castle, and yonder the semblance of a cathedral, or perhaps of the vertical wall of a château with perfect moldings of cornice and plinth. Gently sloping mounds, covered with herbage and



Near St. Paul.

trees, alternate with huge towering bluffs, but each has its own special beauty. All of these does the delicate surface of the lake reflect with marvelous fidelity. Lake Pepin has its stormy as well as its calm aspects, and the many sail-boats which traverse its serene breast with gay and flaunting sails are often wrecked or hurled on the

woody shores. Still, in spite of the danger, the vicinity to St. Paul invites a great number of yachts to try this sailing-ground, so attractive when wind and weather favor. Though the river is romantic and interesting above up to St. Paul itself, the voyager feels that what he has seen at Trempealeau and Lake Pepin so far transcends everything else, it is hardly worth his while to make any more heavy draughts on his resources of admiration.

St. Paul, the capital of Minnesota, is situated on both banks of the Mississippi, twenty-two hundred miles from the mouth of the river. The city was formerly confined to the left bank, the site embracing four distinct terraces, forming a natural amphitheatre with a southern exposure and conforming to the curve of the river. The city is mostly built on the second and third terraces, which widen into level, semicircular plains, the last being about ninety feet above the river. The newer portions of St. Paul are quite irregular, though the original town was very systematically planned. The first recorded visit to the site of St. Paul was that of Father Hennepin, the Jesuit missionary, who was there in 1680. Eighty-six years afterward, Jonathan Carver came to the place and made a treaty with the Dakota Indians in what is now known as Carver's Cave. The United States made their first treaty with the confederation in 1837, and the first claim was entered by Pierre Parent, a Canadian *voyageur*, who sold it two years later for thirty dollars. This claim is the site of the principal portion of the city. At first St. Paul was merely a trading-post, but ten years later it reached enough importance to be laid out as a village, and in 1854, when it had only three thousand inhabitants, it obtained a city government. The name of the city is derived from that of a log chapel dedicated to St. Paul by a Jesuit in 1841. The surroundings are very picturesque. Two caverns, known respectively as Carver's Cave and Fountain Cave, contain several very large and striking subterranean chambers, and, when fully explored, may prove no less great natural curiosities than some of the better known grottoes. Several beautiful lakes near St. Paul make the city quite a summer resort for followers of gentle Izaak Walton, and the fine shooting which is found even in this portion of Minnesota is another attraction for summer and autumn visitors. The city park, two hundred acres in extent, is located on the shores of Lake Como, which is of about four square miles, and affords good boating and angling. The city is the great grain depot of the State of Minnesota, and these large interests have made St. Paul one of the most important of the second-class cities of the West, its population having already reached nearly forty-two thousand.

One of the attractions of St. Paul will always be found, by the lovers of Longfellow's poetry, in the Falls of Minnehaha on the Minnehaha River, an outlet of Lake Minnetonka, whose waters are poured into the Minnesota not far from the junction of that river with the Mississippi. The famous falls are not what one would fancy from reading the poem of "Hiawatha." The volume of water is not great, and it is at its lowest that the effect of the fall is most striking. The chief beauty of the fall is in the crossing of the delicate spiral threads of water, producing the effect of fine

lace. The height of the falls is about sixty feet, and on each side of the top of the precipice are numerous birch-trees, while the top of the gorge is crowned by a dense forest. The veil of the falling water is so thin that one can see the rock behind it.



Falls of Minnehaha.

St. Paul is the end of the navigable waters of the Mississippi, but the beauty of the river, though it is no longer plowed by steamboats, does not cease at this point. Pilgrims of the picturesque always go up the river ten miles to visit the twin cities of

Minneapolis and East Minneapolis, formerly called St. Anthony, which face each other on opposite sides of the river. These two cities were officially united in 1873 under the title of Minneapolis, St. Anthony now being commonly designated as East Minneapolis. They are built on broad esplanades overlooking the Falls of St. Anthony and the river, which is bordered at various points by fine bluffs. The united city has more than forty-six thousand inhabitants, being thus larger than St. Paul. An immense lumbering business is done here, and the flouring-mill interest has reached gigantic proportions, surpassing that of any city in the country. The business prosperity of Minneapolis is in the main dependent on the falls of St. Anthony and the unsurpassed water-power which it furnishes. This useful function of the falls has impaired its picturesqueness, but it is still an interesting spectacle when viewed from the suspension-bridge. From this point of outlook you see the grand rapids as well as the cataract itself. The rapids are very fine, for the river here makes a descent of fifty feet in a mile, and the jostling waters are heaved up in huge waves and sheets of spray, while furious eddies boil and circle in the center. The falls themselves are only eighteen feet high, and, without the rapids, would not specially satisfy the curiosity of the visitor. All along the shore are great masses of limestone slabs, which have been split off from the sides of the bluffs by the combined action of the winter ice and the swift current.

The source of the Mississippi, according to Schoolcraft, who visited it in 1832, is found in a lake called by him Itasca, situated in Northern Minnesota, the waters of which ooze from the base of the hills known as *Hauteurs de Terre*. At the outlet of the lake the Father of Waters is only twelve feet wide and eighteen inches deep, a feeble beginning for the greatest river in the world, if we except the Amazon. The river flows through a series of small lakes and marshes, gaining gradually in width, and tumbles over many rapids and falls on its way down the falls of St. Anthony. The head-waters are much frequented by hunters and trappers, who traverse the shallow and dangerous current in canoes, but only the most skillful hand with the paddle can venture on the swift water till the Mississippi reaches the junction of Crow Wing River, about a hundred and fifty miles above Minneapolis; though, in certain stages of the water, small steamboats ply for nearly a hundred miles above the regular head of navigation.



New York, from Fort Wadsworth, Staten Island.

THE METROPOLIS AND ITS EASTERN SISTERS.

The situation and approaches of New York—Commercial and industrial greatness—Scenes in lower New York—Characteristics of Broadway—Social life in New York—The water-front—Central Park and its attractions—Boston and its early colonial history—Importance as a commercial and manufacturing center—Boston Common—Characteristics of the various portions of the city—Suburbs of Boston—The City of Brotherly Love—Its position among American capitals—Scenes and features of interest—The beauties of Fairmount Park—Baltimore and its situation—Principal features of the city—Its monuments and its pleasure-grounds—The political center of our country—Its foundation and beginnings—The national Capitol—The White House and other public buildings—Characteristics of Washington life.

We have already spoken at considerable length in other chapters of the principal Western and Southern cities, and we must now devote a chapter to the more important cities on our Atlantic sea-board—New York, Boston, Philadelphia, Baltimore, and Washington.

New York, the commercial and financial center of the United States, as well as the largest city in population, is the third great capital of the world, and is destined ultimately, perhaps, to be its first. Though the population of New York City proper is only 1,206,299, according to the census of 1880, yet measured by its metropolitan aspects, which furnish the standard of estimate in fixing the populations of London,

Paris, etc., it should be considered to include the cities of Brooklyn, Jersey City, and Hoboken, which are essentially parts of New York, though none of them are on Manhattan Island. This would swell the number given above to very nearly two millions of people. New York is the most universal and typical of American cities. Here alone may be witnessed the settled phases of our American civilization, as well as many of the most curious aspects of foreign life. The city now includes Manhattan Island; Blackwell's, Ward's, and Randall's Islands in the East River; Governor's, Bedloe's, and Ellis's Islands in the bay, occupied by the United States Government; and a portion of the mainland north of Manhattan Island, separated from it by Harlem River and Spuyten Duyvil Creek. It is situated at the mouth of the Hudson River, and its commercial advantages are unequaled. Its extreme length north from the Battery is sixteen miles; its greatest width is four and a half miles. Its area is forty-one and a half square miles, or twenty-six thousand acres. The island on which the city is mostly built is surrounded on all sides by water navigable for the most part by the largest vessels, and the harbor is one of the safest, largest, and most beautiful in the world.

Less than three centuries have elapsed since Henry Hudson, the Dutch navigator, passed through the Narrows and disembarked from his little schooner on the present site of the Battery. Traders followed Hudson, and in 1614 the future metropolis of the New World consisted of a small fort on the site of Bowling Green, and four houses. It was then called "Nieu Amsterdam," and the domain acquired was named the New Netherlands. When it finally came into possession of the English in 1674, and the name was changed to New York, the settlement expanded and grew with great rapidity. The spirit of the staid and conservative Dutch burgher gave way to that of the pushing and energetic Anglo-Saxon, a race distinguished in history for its success in colonization, and the union of progress and stability which it stamps on its institutions, both political and social. In 1699 the population had increased to about 6,000. At the beginning of the nineteenth century the number had reached 60,000, and the city extended about two miles north from the Battery; in 1830 it was 202,000; in 1840, 312,710; in 1850, 515,000; in 1860, 805,000; and in 1870, 942,000. Until the latter part of 1873 the northern boundary ended at the Harlem River, but in that year the towns of West Farms, Morrisania, and King's Bridge, hitherto a part of Westchester County, were annexed to the advancing metropolis.

Perhaps no harbor in the world is more picturesque, with the exception of the Bay of Naples, than that of New York. From some elevated point on Staten Island the observer may gaze on a vista of natural beauty, heightened by suggestions of human interest and activity, which alike charms the eye and stirs the imagination. The outer bar is at Sandy Hook, eighteen miles from the Battery, and is crossed by two ship-channels from twenty-one to thirty-two feet deep at ebb-tide, and from twenty-seven to thirty-nine feet at the flood, thus admitting ships of the greatest draught. The Narrows is the name of the strait by which the inner bay communicates with the outer or maritime bay, and is formed by the approach of the shores



View of New York from the Bay.

of Long Island and Staten Island within a mile of each other. This strait may be likened to a gate-way from the ocean, while standing like huge sentinels to guard the watery pass are Forts Wadsworth (formerly called Richmond) and Tompkins, on the verge of the Staten Island shore, and Fort Hamilton on the Long Island shore. As the inward-bound traveler sails fairly within the bay, the picture becomes very striking. He is now within the heart of a fleet of stately ships and steamers, plowing a surface cut by all the keels of the civilized world. In the foreground there are patches of green, that in the summer sun sparkle like great emeralds in a silver setting—Bedloe's, Ellis's, and Governor's Islands, whereon are defensive fortifications. Bedloe's Island being the proposed site of the colossal statue of Liberty, the gift of the French people, now being sculptured by Bartholdy. The traveler looks on a map every item of which is eloquent with busy life. In front looms the great metropolis, with its miles of roofs and broken outlines of spires, towers, and domes, speaking of religion, thought, art, trade, and industry, developed under their busiest conditions. On either side, as far as the eye can reach, the water-line is fringed with a dense forest of masts from

phases the latter is far in advance. For example: BOSTON, the capital of Massachusetts, and the principal city of New England, contests with New York the dignity of being the intellectual capital of our country. Indeed, as the home of men distinguished in letters, it is without a rival, and it justly plumes itself on the great names which are associated with its past and present. This is perhaps the peculiar distinction of Boston, though it is sad to reflect that death is swiftly lessening the number of the brilliant men who have contributed so much to the honor of American letters. Boston, too, has intertwined with its past many of the most pregnant facts in our colonial history, as the center of those Puritan influences which have done so much to mold the character of the people and advance our mental and material greatness.

This city is situated at the western extremity of Massachusetts Bay, and is the seventh city of the country in size, the population by the last census being 362,535 souls. The city embraces Boston proper, East Boston, South Boston, Roxbury, Charlestown, Brighton, and Dorchester. It is connected with Charlestown by the Charles River Bridge and with the city of Cambridge by the West Boston Bridge. No city in the country is so noted for the beauty of its suburbs, which embrace the cities of Chelsea, Somerville, and Cambridge, and the towns of Revere, Brookline, and others, all of which contain many splendid residences, the homes of persons doing business in Boston.

The first settlement of Boston was made in 1630 by a portion of the company which came over with John Winthrop from England that year. The Indians had called the peninsula on which Boston stands Shawmut, or "Sweet Waters," on account of the purity of the bubbling springs. The Puritans at first named it Trimountain, but afterward changed the title to Boston, from that old city of the Lincolnshire Fens, England, to which the hearts of the exiles reverted with homesick longings. Thus began to exist Boston with its teeming memories, its dramatic history, its many picturesque and romantic aspects. No one now approaching the city from the bay can distinguish the three hills on which Winthrop and his followers perched themselves. Boston wears the aspect of a broad flat cone, with a wide base lining the water's edge for miles on either side, ascending by a gradual plane to the apex afforded by the State-House. Probably no city in the country is so irregular in its details, though the crookedness and confusion of the streets of the old city have been somewhat rectified by the rebuilding of that portion which was destroyed in the great fire of 1872. The current tradition is, that the streets of old Boston were built according to the tracks of the ancient cow-paths, made by the cattle of the early colonists in going to and from the watering-places.

To give even an outline of the very interesting colonial history of Boston would consume many pages, and require more space than can be given for such a purpose, but a brief glance at some notable events can hardly be avoided. From the very first Boston was the theatre of fierce religious dissension, and the people showed, even in early times, a most resolute front against royal authority. When the English rose against James II at home, Boston threw over the royal government and set up a

new one. The first witch hung in New England, about forty years before the Salem witchcraft delusion, was no less a personage than the sister of Governor Bellingham, who is introduced in Hawthorne's romance of "The Scarlet Letter," and she was a sacrifice to Boston superstition. Religious and political affairs were so intermixed that the clergy practically ruled the colony. During King Philip's War, in 1675, Indian scalps were first brought to Boston as trophies, and it is said that Boston suffered losses five times greater than any other place in the colony. A printing-press was established in 1676 by a graduate of Harvard College, and the first books printed in New England were histories of the Indian war, by Hubbard and Mather. In 1679 a fire occurred, destroying eighty dwellings and seventy-nine warehouses, involving a loss of two hundred thousand pounds sterling, which gives some idea of the growth of Boston at this period. In 1720 the linen manufacture was introduced



View of Boston from the Harbor.

by some Scotch-Irish settlers, and throve wonderfully. This was the beginning of the great manufacturing interest in the textile fabrics which has made Boston and its vicinity so important. A tremendous riot occurred in 1747, owing to the impressment of citizens by Commodore Knowles, a naval commander, for the stubborn Puritan spirit was always alert against infringement of its rights. Eight years later, and seventeen days after the great earthquake at Lisbon, Boston was dreadfully shaken by the severest earthquake ever felt in New England. In 1761 came the first rumblings of the American Revolution in the "writs of assistance" which were tried in Boston. At the first news of the intention of England to apply her revenue system to the colonies, Boston made a fierce stand. Then came, a few years afterward, the Boston massacre of 1770 and the destruction of the tea in 1773. Events crowded fast on one another, and in 1775 about four thousand British troops and several armed vessels

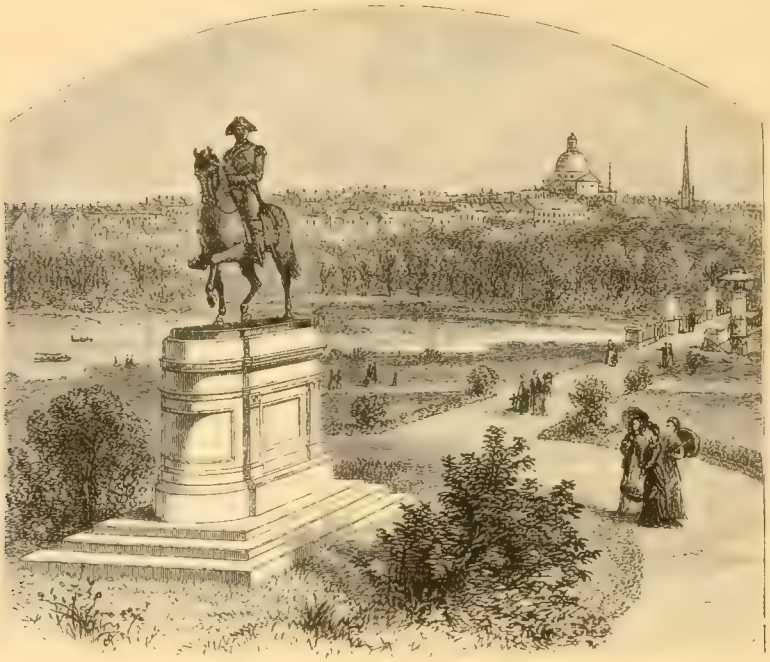
had collected there. It was not long before the battles of Lexington and Bunker Hill set all the colonies in an unquenchable flame of rebellion, and so was begun that war which added a new and great nation to the peoples of the world. Boston may indeed be proud of the part which she took in the matter, for her citizens did more than any others in the country to fan the first sparks of resistance into active and enduring life. Faneuil Hall, known as the "Cradle of Liberty," and other historic buildings, are still preserved with the most scrupulous care.

The approach to Boston by water shows many natural beauties, which have been heightened by artificial adornment. The narrow harbor curves on either side, and is dotted with islands. Long stretches of beach are alternated with steep jutting promontories, until the coast of the bay finally vanishes into the thickly settled suburbs and the city itself. The islands are crowned with fine forts, light-houses, hospitals, almshouses, and other public institutions, and fill a pleasing part in the landscape. Fort Warren and Fort Independence, with their lofty ramparts and deep-green embankments, stand among the most important fortresses in the country. A glance at the Boston shipping, while it does not reveal the forest of masts and funnels which enliven the port of New York, gives evidence of a busy commerce. One characteristic of the view is observed in the multitude of many-windowed factories, and tall, smoke-stained chimneys, which indicate the weaving of textile fabrics, the fruits of skilled handiwork, and the manipulation of the metals. The total value of the commerce for the year ending January 1, 1880, was $103,679,935, the imports being $48,552,309, and the exports $55,127,626. Boston then had 3,521 manufacturing establishments, in which was invested $42,750,134, and out of which came a product of $123,366,137. The total arrivals and departures at the port were 16,225.

By passing from the eastern to the western side of the city, we observe the results instead of the processes of industry. Ascending some point of vantage, like a church-steeple, the beholder looks out on a striking scene of brightness, beauty, and luxury, where all the gifts of nature in elevation, declivity, and outline, have been enriched by artifice. In the foreground lies the Public Garden, a gem of a park, adorned with thriving trees, lawns, flower-beds, fountains, statues, etc. Beyond it, almost hidden in the foliage, is the Common, rising by a graceful plane to the State-House at its summit, here and there interspersed with hillocks, whose sides peep through openings in the trees, and at whose base are broad, open levels, for military manœuvres and out-door games. Behind the Common you catch glimpses of the steeples and public buildings of Tremont Street; the historic steeples of Old South and Park Street Church; the United States buildings and the magnificent Masonic Temple. On the left is Beacon Street, its buildings piled irregularly one above another, of brick, brown-stone, and marble, and of the greatest diversity of color and form. This is the street of the family and moneyed aristocracy of Boston. Dear to every resident of Boston is the historic Common, around which cluster so many colonial memories. Here the Puritan cows fed, and the Puritan train-bands drilled; here witches were hung, and women with scarlet letters stitched on their gowns expiated

their shame before the stern colonists; here were fierce tussles with Indians, and here many a Puritan gallant crossed sword-blade with his rival; here George Whitefield poured out his melting eloquence, and the old magistrates in their starched ruffles held high festival; here, in later times, the patriots hung their red-coat foes in effigy; and here, according to the old chronicler, was the spot "where the gallants, a little before sunset, walk with their Marmalet Madams till the bell at nine-o-clock rings them home."

The Common has been for more than two centuries the great promenade for Boston, the trysting-place of lovers, the play-ground of the children. It consists of about fifty acres, and is surrounded on all sides by stately squares of houses. It is



Public Garden, Boston.

of great natural beauty, and its noble elms, some of which are two centuries old, rise to a great height and form grand natural arches, while the turf is as soft and thick as the nap of the costliest carpet. It sweeps down the slope of the hill, on the edge of which is Beacon Street, and reaches its southern limit at Boylston Street. The effects of the foliage and grass in this charming little park can not be surpassed anywhere, and the maze of irregular shaded avenues is very picturesque. Memorials of its age and teeming history everywhere abound. In one corner is a hoary old grave-yard with weather-stained, broken tombstones, and imbedded vaults, whose padlocks are rusted. Hard by the Frog-Pond, the lakelet in the Park, the "Great Elm," a remarkable landmark, stood till 1876, when it was blown down. This tree was said to have antedated the settlement of the city. An iron railing protected it,

and an inscription told of its venerable age, its historic interest, and its perils by wind and storm. This grand old tree was nearly twenty-two feet in circumference, and more than seventy feet high, while the spread of its branches was eighty-six feet. On Flagstaff Hill, overlooking the Pond, is the costly *Soldiers' Monument*, ninety feet high, with four statues of heroic size at the base, and surmounted by a colossal figure of America, standing on a hemisphere and guarded by four eagles with outspread wings. Near Park Street is the beautiful *Brewer Fountain*, of bronze, cast in Paris, and adorned with statues. West of the Common, on the Charles River, is what is known as the Back Bay, ground reclaimed from swamp within the last two-score years. This is a quarter of elegance, luxury, and taste, where the wealth of this generation has built many of the most splendid residences and other structures to be seen in Boston, though it lacks the historic dignity and sedateness of other quarters. This region stretches for about two miles back from Beacon Street to Roxbury, and may be called the Fifth Avenue portion of Boston, which it resembles in lavish elegance. Stately without being cheerless, new but not glaring, the substantial New England character is impressed on its solid and graceful blocks, its broad, airy streets and squares. A quarter much affected by the staid old families, the blue blood descended from the Mayflower pilgrims, is the Beacon Hill district, and such streets as Charles, Mount Vernon, Chestnut, and Louisburg Square. These are shaded by noble elms, and the houses have a look of old-fashioned elegance and solidity.

Not far from this tranquil and aristocratic neighborhood you find the business quarter begins. You only go down the slope of the hill to be sucked in the tide of trade that rushes through Tremont Street, and find yourself in the midst of official, commercial, and historic Boston. Tremont, Winter, and Washington Streets are the main thoroughfares for retail business, State Street the financial center, and in Pearl, Franklin, Chauncey, and Sumner Streets are many of the great wholesale establishments. Between Tremont Street and the bay are many of the memorable spots and edifices around which cluster associations of the most noteworthy events in Boston history, as well as the most important public buildings. The historic relics are found scattered over the northern and eastern end of the peninsula, but the tortuous region at the head of State Street and the northern limit is the most thickly studded with memorable spots and buildings. Among these old structures redolent of the past are King's Chapel; Old South Church, which Burgoyne turned into a cavalry-school for his troopers; the Old State-House, which looks down sedately on the haunts of the brokers and money-changers; and Faneuil Hall, where the Boston burghers were first roused to resistance against the exactions of the crown. Faneuil Hall is a large, square, venerable-looking building, and is still used for the original purposes, as a market-place beneath, and for public assemblages above. In the great public hall, which has resounded to the eloquence of our great men from the time of Harrison Gray Otis and Samuel Adams down to our own day, are hung a large number of valuable portraits of much historic interest.

The suburbs of Boston are unequaled among American cities, and among these



Boston, from Mount Bowdoin.

Brookline is perhaps the most beautiful. The amphitheatre of hills, in which the peninsula is set as in a frame, is circular, and is so undulating and irregular as to furnish the most picturesque opportunities for fine effects in landscape-gardening, which suburban residents have improved to the utmost. Nature has most richly endowed this series of hills, for it consists of circles of uneven elevations one without the other; and from many of the farther summits the city, with the yellow dome and glittering cupola of the State-House at the apex, may be seen through its extent, inclosed in a magnificent framework of foliage. The view is specially striking from Mount Warren, where General Warren is buried, Mount Hope, Mount Dearborn, and Mount Bowdoin, the latter of which stands just south of the old town of Roxbury. All the suburbs are fairly bedded in foliage, many old forest-trees, as well as many due to careful cultivation. The arts of lawn and hedge culture, and of garden decoration, have been most successfully prosecuted. In the midst of large areas of lawn and copse you will see now square, old-fashioned, slop-

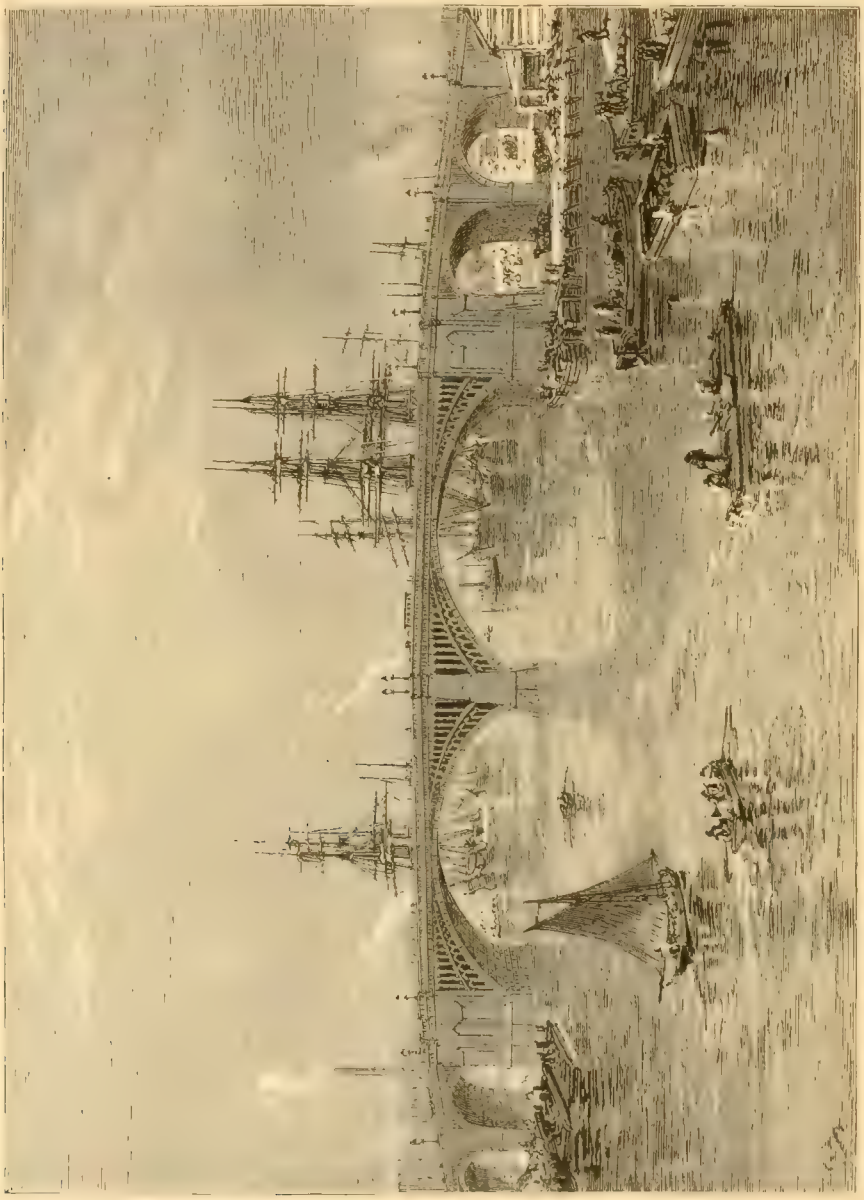
ing-roofed mansions of a century since; now modern and fanciful residences with French roofs and towers, and an amplitude of verandas—but all of them admirably kept. There are some estates in these suburbs which would not shame an English noble whose ancestral halls had come down to him from the Conquest, with their roods of hedge, broad avenues passing a half-mile through a park before reaching the house, their large conservatories and cottages, their close-cut terraces and blooming gardens. Any of the suburbs of Boston may be reached in half an hour by rail from the heart of the city—a peculiar advantage which, aside from their natural beauty, makes them eminently desirable as places of residence. At Charlestown is the Bunker Hill Monument, occupying the site of the old redoubt on Breed's Hill, and commemorative of the eventful battle fought on June 17, 1775. This is a massive obelisk of Quincy granite two hundred and twenty-five feet high, from the observatory at whose height is obtained a splendid view of Boston and the environs. The monument was dedicated in 1843, and on this occasion Daniel Webster made the greatest of his orations. Near by is a fine statue of General Warren, who was killed on the spot.

That suburb, however, which will recall the most interesting associations, is the city of Cambridge, the seat of Harvard College and the home at different times of many of the men who have most distinguished themselves in American letters. It wears the same aspect of umbrageous beauty, spacious streets, and fine residences characteristic of the other suburban places. Harvard University stands in its center in a shady park, and its various edifices are grouped without any apparent order. This is the oldest and most richly endowed institution in the United States. It was founded in 1638, by the Rev. John Harvard, and now consists of fifteen buildings, from two to five stories in height, with an average attendance in all its departments of fifteen hundred students, to whom there are two hundred and twenty instructors. The college-yard is about fifteen acres, thickly shaded with large elms, though there are about sixty acres of ground belonging to the university in Cambridge. One of the notable places in Cambridge is the Longfellow home, memorable as having been the headquarters of General Washington during the siege of Boston, as well as the life-long home of the most honored of our poets. It is a large square wooden mansion with a veranda, under wide-spreading elms, on one side, a garden behind, and an extensive lawn in front. A little farther on is "Elmwood," the ancestral home of the poet Lowell, which is also an old Revolutionary relic. Among the historic mementos is the Washington Elm, thought to be three hundred years old, under whose branching foliage Washington stood when he formally took command of the colonial army in 1775.

The visitor to Boston, after having experienced the feverish energy and movement of New York, is conscious of a certain leisure and sedateness of manner in the people, a certain calm satisfaction in themselves and in their own ways, which, though it may suggest a tincture of provincial spirit, is not without a great charm of its own. Something, too, of a similar atmosphere is observable in the Quaker City, though the

latter has a very distinct physiognomy of its own. Philadelphia, it may be said, is only less notable for its wealth of Revolutionary memories than Boston.

PHILADELPHIA is the largest city in the country in area and the second largest in population. It lies between the Delaware and Schuylkill Rivers, six miles above their



Chestnut Street Bridge, on the Schuylkill.

junction, and ninety-six miles from the Atlantic Ocean. The city is twenty-two miles long from north to south, and from five to eight miles wide, the total area being a little more than one hundred and twenty-two square miles, within which there are three

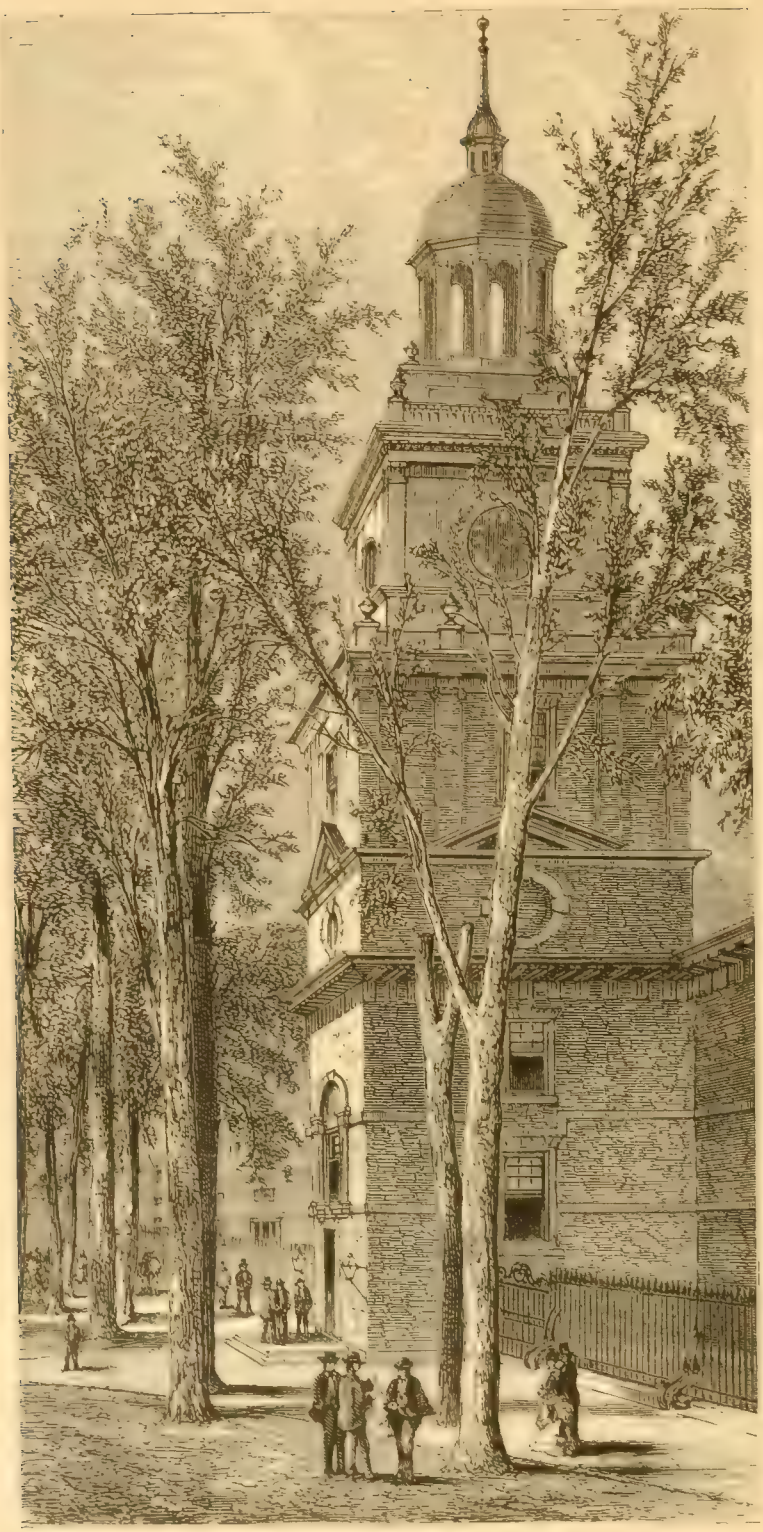
hundred and fifty miles of paved streets and more buildings than any other city in the country. It is the only great city in our midst where the thrifty artisan can acquire the ownership of his own home. This is owing to the cheapness of city-lots, and a peculiar system of building associations, which enable the poor man to have a house erected for him, and which give him the privilege of paying for it by installments.

This city was founded in 1682 by William Penn, who brought over a colony of Quakers and purchased the site from the Indians. Immigration was so rapid that in two years the new city had twenty-five hundred souls. Philadelphia prospered so greatly that it was the most important city in the country during the colonial period and for a quarter of a century after the Revolution. The first Continental Congress assembled here (in 1774), as did all the subsequent congresses during the war. It was in Philadelphia that the Declaration of Independence was made and issued, and here that the convention assembled which formed the Constitution of the United States in 1787. It continued the seat of the government of the country till 1800, when it was transferred to New York, where Congress had its seat till the establishment of the national capital at Washington. The population, which in 1800 was 41,220, had increased to 121,376 in 1850, to 565,529 in 1860, and in 1880 the census returns gave 847,170. The commerce of Philadelphia is large and increasing, but manufactures are its chief source of wealth, and in these, according to the census of 1880, it is the second city of the Union, New York alone surpassing it. According to the last returns the number of establishments was 8,377, representing an investment of $170,495,191 in capital. In its proportion of heavy manufacturing it probably ranks next to Pittsburgh. The products of the year 1880 were valued at $304,591,725. The leading industries are the manufacture of locomotives and all kinds of iron-ware, ships, woolen and cotton goods, shoes, umbrellas, and books. In commerce Philadelphia ranks fourth among the cities of the United States.

There are but few historical monuments left standing in Philadelphia. The venerable Christ Church in Second Street was built in 1727, and, though now hemmed in by prosaic brick and mortar, it is well worth a visit, as it is a stately and beautiful memento of the colonial age. Independence Hall, erected as a State-House in 1729, is in Chestnut Street, and to this the patriotic pilgrim will turn with peculiar interest, for here was the Declaration of Independence adopted.

The room in which this famous event occurred presents the same appearance now as it did at that time; the furniture is that used by Congress; and there are a statue of Washington and numerous portraits and pictures. The west room is a depository of many curious Revolutionary relics. In it is preserved the old "Liberty Bell," the first bell rung in the United States after the passage of the Declaration. In Congress Hall, in the second story, Washington delivered his farewell address. In Carpenter's Hall, a few blocks below on the same street, assembled the first Congress of the United Colonies in 1774. Both these buildings are most carefully preserved.

Philadelphia, from the plan on which it is laid out, may be the most comfortable and convenient of cities, but its streets uniformly crossing each other at right angles



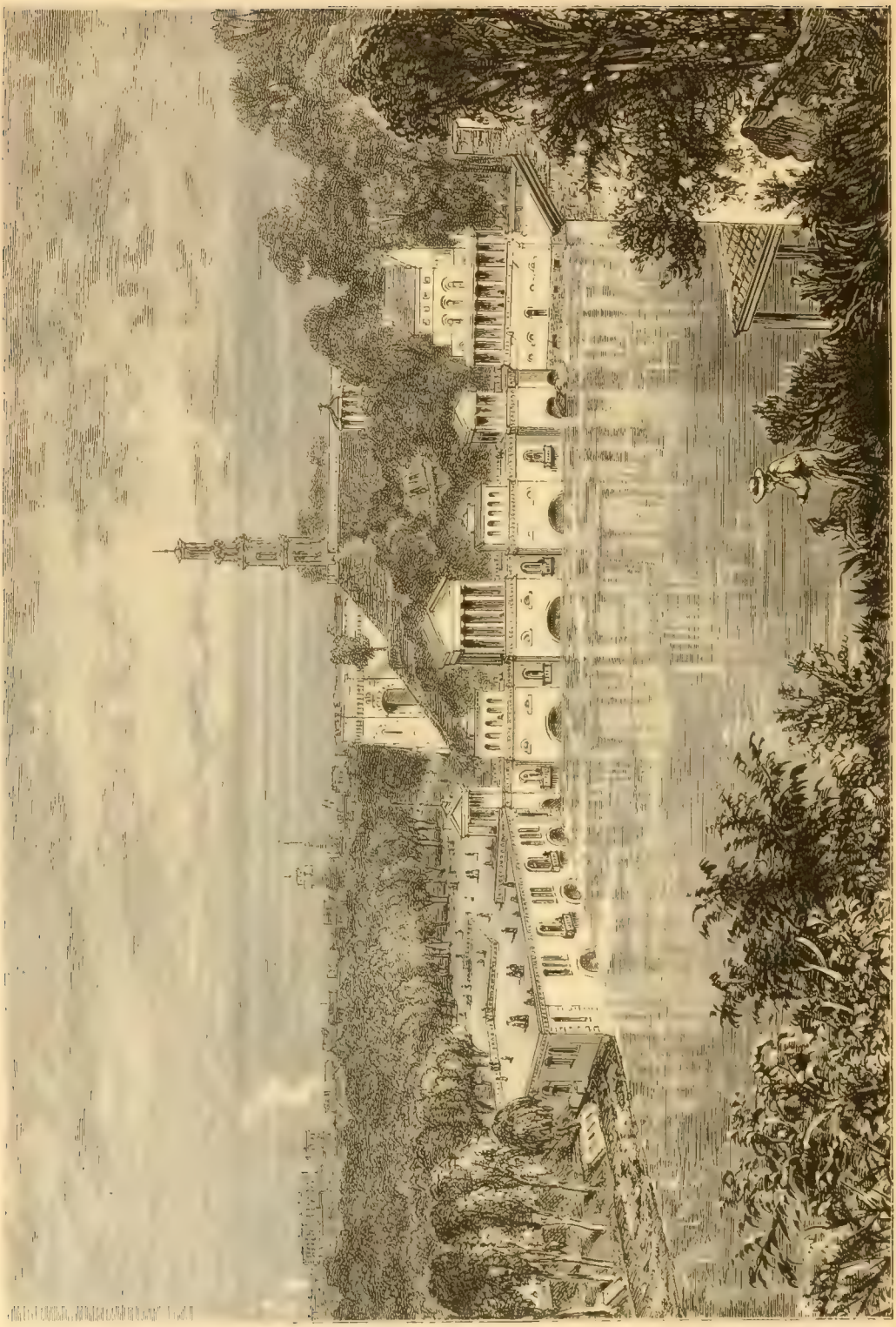
Tower, Independence Hall, Philadelphia.

certainly lack the picturesque element. There are, however, on these stiff and narrow thoroughfares a great number of noble edifices, public and private, temples of charity, religion, industry, and art, which go far to redeem the monotony of the streets. The great business thoroughfare is Market Street, and here the bulk of the wholesale traffic, both foreign and domestic, is transacted. The retail business of the city is mostly concentrated on Chestnut, Arch, and Walnut Streets. The handsome private residences are in the west and northwestern parts of the city. West Philadelphia, across the Schuylkill, is full of elegant and tasteful villas, and the western portions of Walnut, Chestnut, Arch, Spruce, and Pine Streets are occupied by many splendid residences; while Broad Street is a spacious boulevard

running for miles between the dwellings of the wealthy, which are in many instances adorned by elaborate lawns and gardens. A characteristic of most of the residence streets in Philadelphia, except those portions which have been taken possession of by the rich and rebuilt in a later style, is the primness of the architecture. The houses are square and plain, built of red brick with white-marble door-steps and trimmings. This gives a very peculiar aspect to Philadelphia, that separates it from all other cities except Baltimore, which to some extent shares the same architectural appearance.

The numerous squares of shade and greenery, laid out according to the original plan of Penn, are a wholesome feature of the city. These are ornamented with stately trees, many of which were denizens of the primeval forest, that existed before the arrival of the Quaker immigrants, and drinking-fountains in their midst complete the picture of coolness and refreshment in contrast with the glare and warmth of the streets. It is without the purpose of these descriptions of cities to make special allusion to notable buildings aside from those of historic or national interest, but it is worth while to say a word about two or three public institutions of the city. The careful attention given to art and science has resulted in the building of the Academy of Natural Sciences and the Academy of Fine Arts, both edifices of great size and architectural beauty, which are among the finest in the United States of their kind. The Masonic Temple is an immense structure with a tower two hundred and thirty feet high, and within the building there are halls finished in all the different styles of architecture. Girard College is a celebrated edifice founded by Stephen Girard, a French merchant, who died in 1831, and bequeathed $2,000,000 to found an institution for the gratuitous instruction and maintenance of orphans, and left the rest of his estate to support the college, a fund now amounting to $7,000,000. From the roof of this huge white-marble structure may be had a very fine view of Philadelphia, as the site is on the summit of a slope.

The commerce and shipping of Philadelphia may be viewed in their most picturesque aspects on the wharves of the Delaware River. The water of the river has such breadth and depth as to move like an arm of the sea rather than a river, and here the largest vessels come without difficulty. But, if the Delaware is the source of commercial prosperity to the city, the Schuylkill offers to its people their most charming out-door pleasures. The attractions of this river begin at Fairmount, the seat of the Water-Works, which for many years have been one of the recognized "sights" of the city. Twenty-five years ago Fairmount meant only the buildings in which the machinery used in supplying the city with water is inclosed and the little pleasure-ground lying near it. Now the vast stretch of Fairmount Park is included in the term. This grand park in its entire extent comprises four thousand acres, and is by far the most extensive pleasure-ground in the country. It lies on both sides of the Schuylkill, and the two sections are connected by bridges. The park was gradually formed through the purchase by the city of several very elegant and well-cultivated estates. Not only did these acquisitions offer ample room for one of the finest parks in the world, but the striking natural advantages were enhanced by the fact that



Fairmount Water-Works.

these country-seats were all richly improved. The ancestral trees were large and ancient, and the grounds were laid out with all the taste of the best landscape-gardening. So the authorities had only to combine a number of pleasure-grounds already



View on the Schuylkill.

existing and invite the citizens to the enjoyment of one of the most delightful of out-door resorts. The quiet nooks, the charming retreats, and perfect bits of woodland scenery in Fairmount Park are innumerable, the windings of the river affording

a constant variety of effects to the eye. In the West Park stood the buildings of the International Exhibition of 1876, most of which have since been removed. The hundreds of thousands of visitors will long remember the sylvan loveliness with which they were then made acquainted. In the upper portion of Fairmount Park is the very picturesque Wissahickon River, which winds between steep and richly wooded banks, and has all the wildness of a stream far from the haunts of men. A wide carriage-road runs along the bank, and is a favorite drive for Philadelphians, the river dancing along on one side and rocky steeps with overhanging shrubbery bordering the other. Philadelphia may justly be proud of her beautiful park, which possibly one day, when it shall have been more perfectly ordered, will be among the two or three most remarkable ones in the world.

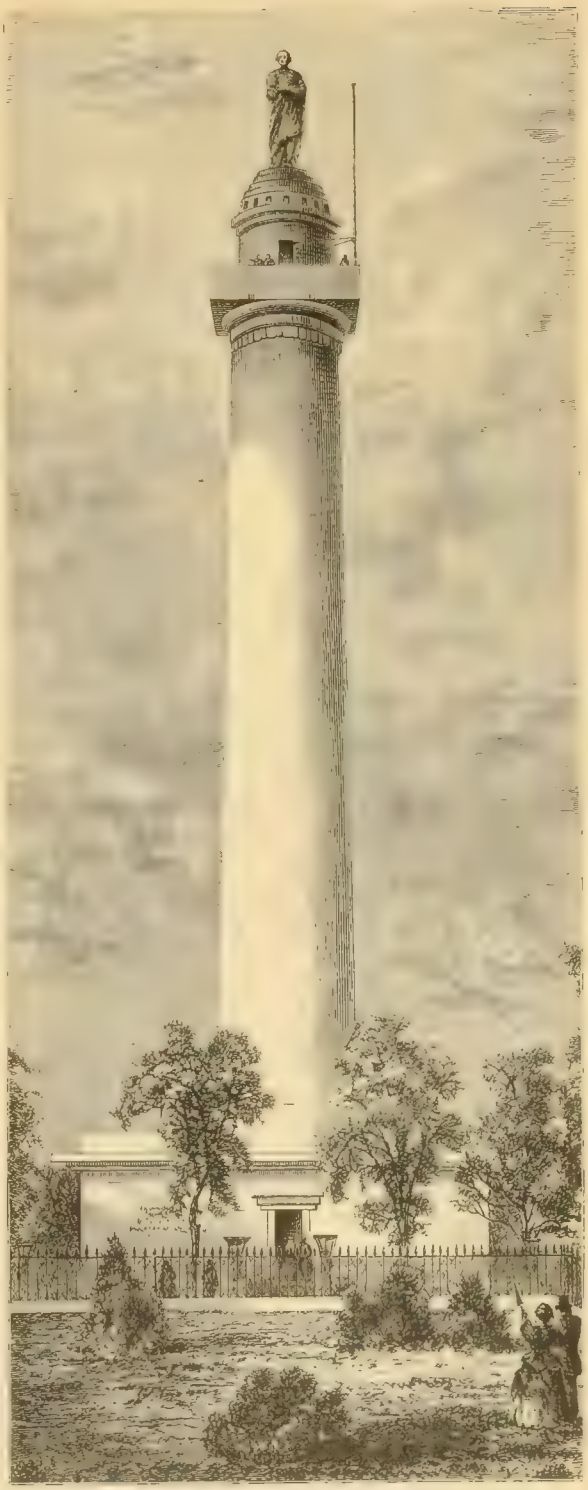
The resemblance between many external aspects of Philadelphia and BALTIMORE will impress the visitor strongly. The appearance of the houses is in large degree nearly identical, and the characteristics of the people in both cities are quite similar. The old-fashioned quiet methods of the past seem to rule both in business and social life. In both cities there is a very large well-to-do middle class who live simply, comfortably, and without pretense; and there is also the sharply defined residue of an old colonial aristocracy, which forms something as nearly an hereditary social caste as is possible under our institutions. The existence of a large and influential moneyed class, the members of which have arisen from obscurity and exercise a predominant influence, is less observable in Philadelphia and Baltimore than in any other prominent American cities, if we except New Orleans and St. Louis.

Baltimore, the chief city of Maryland, and in population and commerce one of the most important in the United States, is picturesquely located on the north branch of the Patapsco River, fourteen miles from its entrance into the Chesapeake Bay, and about two hundred miles from the Atlantic. The city embraces an area of about twelve square miles, nearly half of which is built on. A small stream called Jones's Falls, running north and south, and spanned by numerous bridges, divides the city into two nearly equal parts.

The site of Baltimore was selected in 1729, though the present name, in honor of Lord Baltimore, the lord proprietor of Maryland, was not given till a subsequent period. Prosperous settlements had grown on both sides of the falls, and were called Jonestown. The place thrived marvelously, and a great business in tobacco, the grinding of flour, tanning, etc., brought no little wealth to the town. So in 1745 the old prosaic title was discarded for the more stately name by which the city is now known. The masterly portrait of Lord Baltimore by Vandyck, now in Washington, shows that the growing town honored itself in selecting such a sponsor, for a nobler figure of a man, soldier, and courtier can not be imagined. There was indeed propriety in the choice. The English ideas and methods long prevailed in Baltimore, and in the society of the aristocrats of the colony the first lord proprietor of Maryland would have found congenial spirits. Even to-day the old-fashioned courtesy and punctilio are not altogether gone. Baltimore has never lost its reputation for the

beauty and attractiveness of its women, nor for the hospitality and frank cordiality of the homes which they grace.

In 1780 the city became a port of entry, and in 1797 it received a regular charter. At this time the population amounted to twenty-six thousand, and in 1812 this had increased to forty thousand. A traveler who visited Baltimore at this time says that the more opulent citizens lived with far more luxuriousness and with greater taste than people of the more eastern cities, and proceeds to enlarge on the excellence and variety of the markets, for even then canvas-backs and terrapins were famous in Maryland. In 1850 the population had reached nearly 200,000; in 1860 it was 212,418; in 1870, 267,354; and in 1880 it had reached 332,190. The commerce of Baltimore is very active and important. In addition to many coastwise lines, two lines of ocean-steamers now start from this port, and through her two great arteries of traffic, the Baltimore and Ohio and the Northern Central Railways, she competes vigorously for the grain-exporting trade of the West and Northwest. This city is a great entrepot for the export of tobacco, cotton, petroleum, bacon, butter, cheese, and lard. It is the chief point for working the rich copper-ores of the Lake Superior region, and gold and silver smelting is also beginning to occupy



Washington Monument, Baltimore.

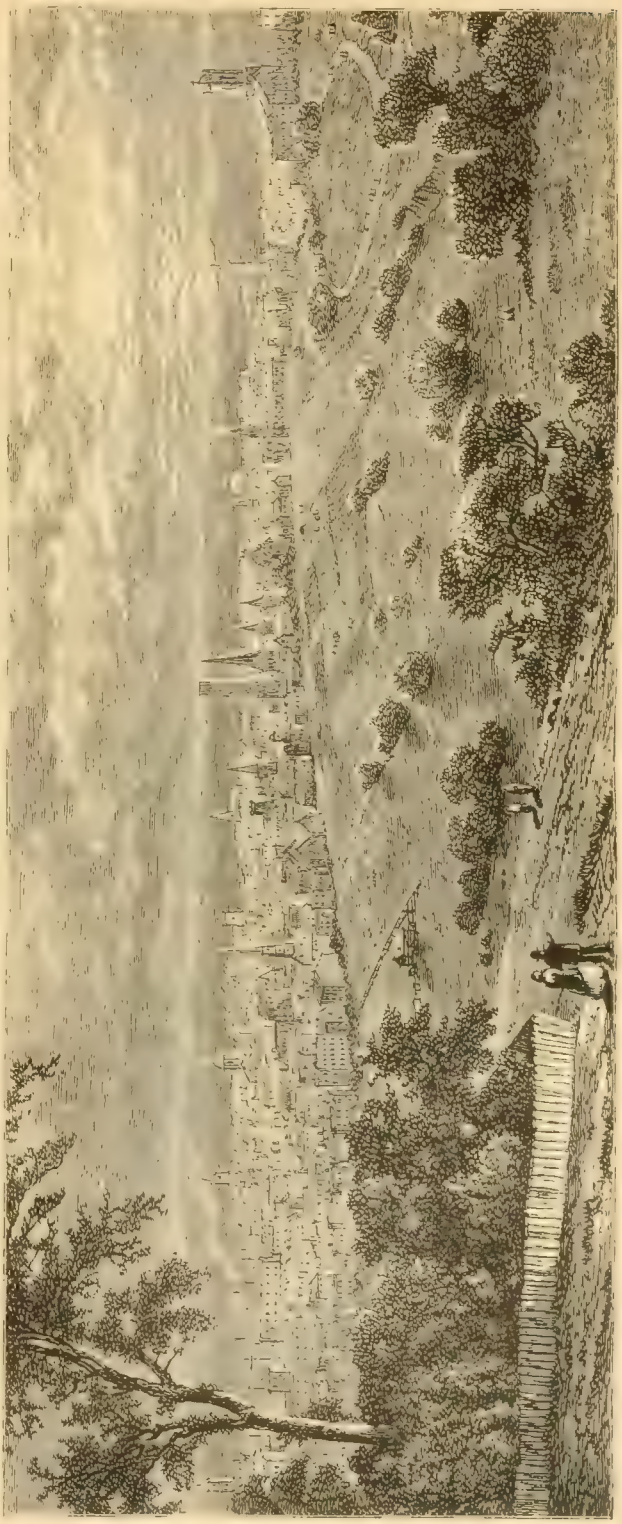
considerable attention. The number of industrial establishments, including iron-works, rolling-mills, nail-factories, locomotive-works, cotton-factories, etc., reached, according to the latest census figures published, 2,261, and the canning of oysters, fish, meats, fruits, and vegetables, reached an annual value of more than $5,000,000. The entrance to the port of Baltimore is defended by one of the most important fortresses in the United States—Fort McHenry, situated on a point of land between the Patapsco and the harbor. This was successfully defended against a British fleet by Colonel Armistead in the War of 1812, and the national song of the "Star-Spangled Banner" was written by Francis Scott Key, who, as a prisoner on a British man-of-war, witnessed the bombardment. The flag that waved over the fort is still in possession of a descendant of Colonel Armistead, and on one of the white stripes is written the name of the defender of the fort.

Excellent points of view from which a good survey of Baltimore may be had are Federal Hill and Patterson Park, which are on opposite sides of the harbor. The former stands on the south side of the inner basin, crowned by a signal-station, and commands an extensive prospect of the shipping, the city to the north and west, and the river and the bay. Patterson Park, comprising about fifty-six acres, is in East Baltimore, and here still remain the earthworks thrown up in the War of 1812. This little park is a favorite resort, though, of course, far inferior in attraction to the newer Druid Hill Park. But the finest prospect may be had from the top of Washington Monument, which stands foremost among the public attractions of the city, which is so celebrated for the number of its monuments as to be called sometimes the "Monumental City." This memorial is one hundred feet above tide-water, and consists of a Doric shaft one hundred and seventy-six feet high, mounted on a pedestal twenty feet high; and on the top of the column is an heroic statue of Washington sixteen feet high, the total height above the river thus being three hundred and twelve feet. The shaft is of white marble, and cost $200,000, the site having been contributed by Colonel John Eager Howard in 1816. The survey of Baltimore and the environs is almost a bird's-eye view. Below is a sea of roofs, from which the spires of church and other pinnacles rise like masts, and the rounded metal roofs of machine-shops and public buildings gleam like sheets of bronze and steel. To the south stretches the Patapsco far down to the bay, and on a clear day the glittering summit of the State-House at Annapolis, forty miles away, can be clearly seen. To the north and west are the hills dotted with villages or single villas, or dense forest-growths.

Battle Monument, standing in Monument Square, which was erected in 1815 to the memory of those who had died in defense of the city against the British, is also a massive and beautiful though not a lofty memento; and other similar public ornaments are the Wilder Monument, dedicated to the Order of Odd-Fellows; the Wells and McComas Monument, which does honor to the memory of the boys who shot the British commander, General Ross, September 12, 1812; and the Poe Monument, which preserves the memory of the author of "The Raven." Among the pub-

lic institutions of the "Monumental City" are several to which special attention should be called. The Peabody Institute, which faces Washington Monument, was endowed by the rich London banker and philanthropist. It is designed for the diffusion of knowledge among the masses. It contains a free library of sixty-eight thousand volumes, a lecture-hall, and a conservatory of music, to which is being added an art department. Another notable institution is the Johns Hopkins University, which was endowed with a fund of three million dollars by Johns Hopkins, a wealthy citizen who died in 1873. The same public-spirited man gave two millions to build and support a great hospital now in course of erection, said to be the finest in America. Baltimore has many striking and massive buildings, public as well as private, which can not be dwelt on in this article, for we must confine ourselves to general description.

The financial center of Baltimore is in Exchange Place and in the adjacent squares, which are devoted to bankers, brokers, insurance companies, etc. A short walk finds us in Baltimore



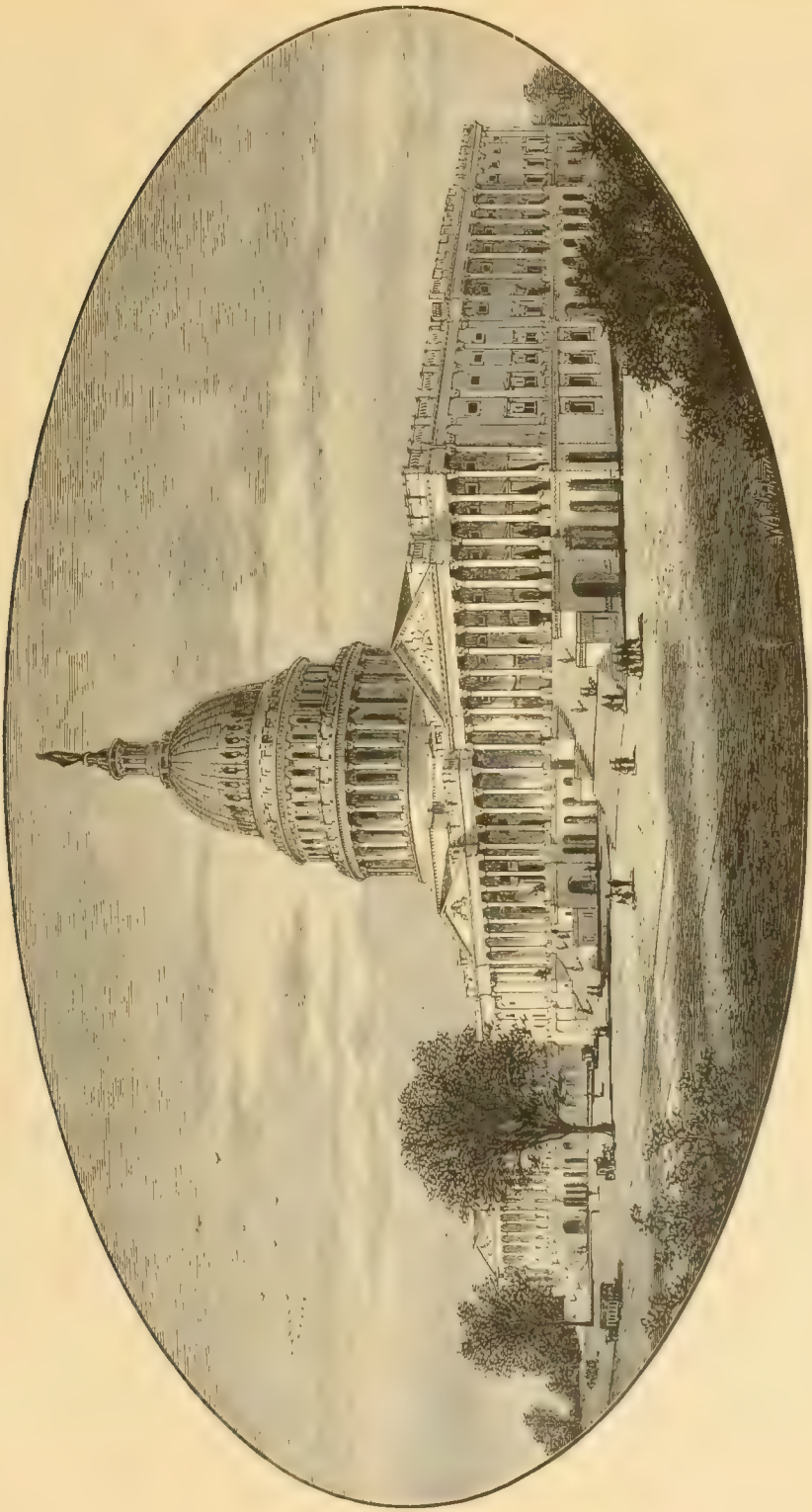
Baltimore, from the East.

Street, running east and west, which is the main business thoroughfare, and in it, or near it, are located all the notable shops, restaurants, hotels, etc. It is estimated that more people pass the corner of Baltimore and Calvert Streets than any other spot in the city. The most fashionable residence portion of Baltimore is the vicinity of the Washington Monument, and the most attractive promenade is North Charles Street.

Baltimore is possessed of a spacious and beautiful park, called Druid Hill, purchased by the city on the death of the former owner, Lloyd Rogers, who lived here alone on a great ancestral estate. It lies on the northern suburbs of the city, and embraces nearly seven hundred acres of well-diversified surface. Steep wooded hills rise two hundred feet above the tide, giving extensive glimpses of the city and its surroundings. Sequestered dells; shady valleys, watered by the purest brooks and springs; drives winding through meadows and woods; bridle-paths and foot-ways which lead beneath deep forest arches—render the park one of great sylvan beauty and seclusion. Without much artifice, except that shown in the restoration of the old family mansion and its surroundings, Druid Hill's great charm is its natural attractiveness of wood and water, grassy lawns and branching shade, which darkens here and there into forest depths. This, of course, is the favorite goal of riding or driving from the city; and here, in the evenings of early summer or autumn, may be seen a brilliant display of the beauty and wealth of Baltimore. Druid Lake, one of the beauties of the park, is the main storage reservoir of the water system of the city. The suburbs of Baltimore are also very attractive, and here live many of the rich merchants of the city, who drive back and forth in their own vehicles.

Washington, the political capital of our country, is forty miles from Baltimore, and is situated on the north bank of the Potomac River at its confluence with the Eastern Branch. The site is very advantageous, consisting of an extensive, undulating plain, surrounded by rolling hills and diversified by irregular elevations which furnish imposing positions for public buildings. The site of the city, if not chosen by Washington himself, seems to have been selected through his agency, and it was he who laid the corner-stone of the Capitol on September 18, 1793. Seven years afterward the seat of the government was removed thither. The city was also planned and laid out under Washington's direction, who desired that it should be called Federal City, but the name which it now bears was conferred two years after Washington's death. The land included in the District of Columbia was ceded to the Government by the States of Maryland and Virginia. Georgetown, which is now a suburb of Washington, is older than its more celebrated neighbor, and was at one time of so much importance that it was the fourth among the river-ports of the United States. But it is now simply a picturesque old place, shaded with magnificent trees and full of those substantial old red-brick mansions, in park-like inclosures surrounded by high walls, so much affected by the political and social aristocracy of Virginia and Maryland in the olden time.

Washington, once only a political capital, is becoming more and more a great social

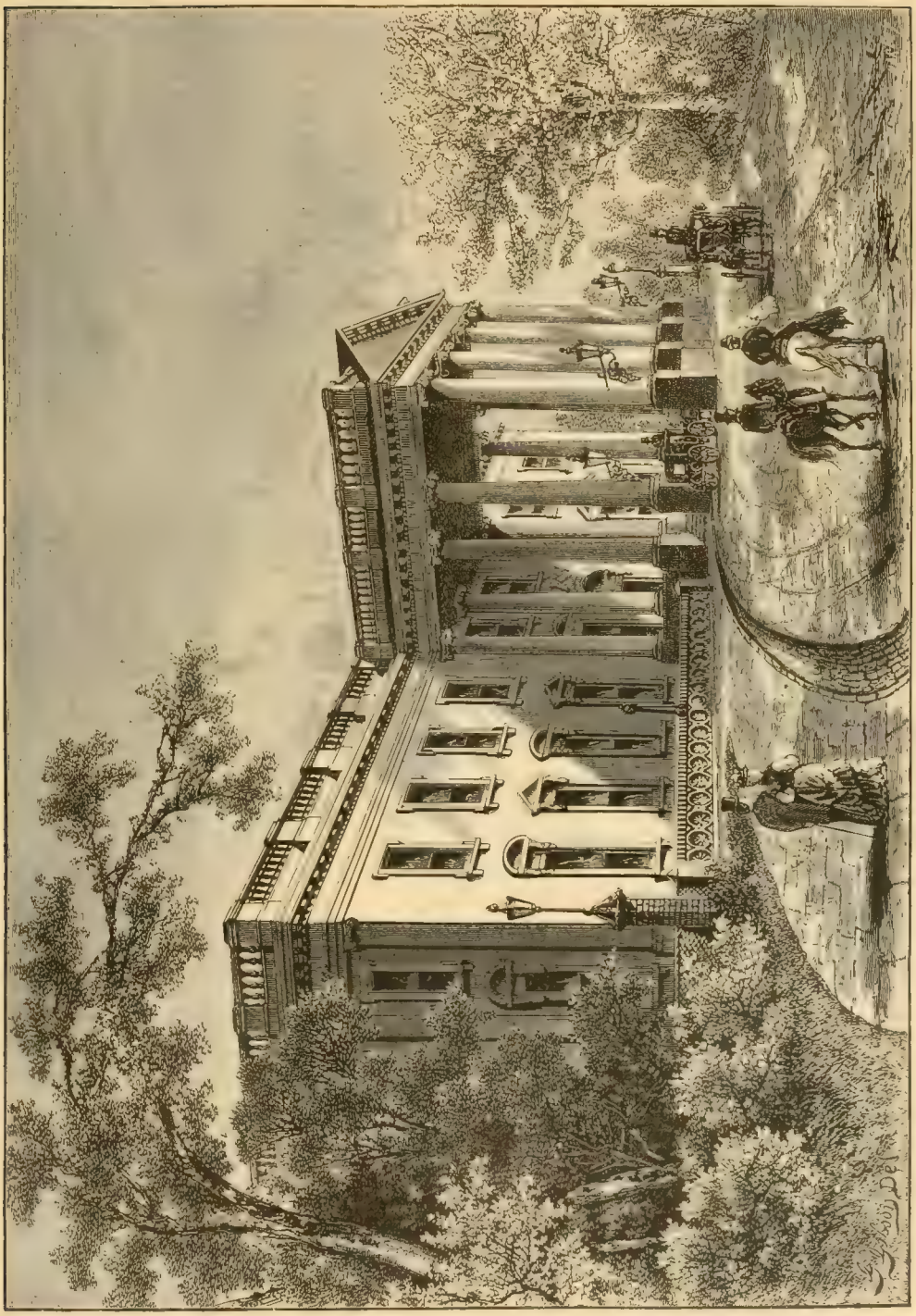


The Capitol at Washington.

capital, and perhaps it is yet destined to lead the van in this respect. Its population reached, according to the last census, 147,307, and this number is augmented by a floating population of many thousands during the sessions of Congress. Its commerce and manufactures are unimportant, business being confined to the local trade growing out of a large population. It is one of the most clean and beautiful of American cities, the improvements made during the last fifteen years having almost transformed it.

The governmental buildings, of course, are the chief attraction of the city, and among these the Capitol not only ranks first, but is probably the most magnificent public edifice in the world. Its white-marble pile is situated on the brow of a hill, amid a nest of thick foliage, and beneath it spreads a beautiful park of fifty acres' extent. It consists of a main building three hundred and fifty-two feet long and one hundred and twenty-one feet deep; and two wings or extensions, each two hundred and thirty-eight by one hundred and forty feet. This gives a total length of seven hundred and fifty-one feet, and the area covered is about three acres and a half. On the steps of the central portico are groups of statuary and colossal marble statues. Bass-reliefs in bronze and marble and friezes give dignity and beauty to the principal entrances. The bronze doors of the rotunda and the Senate wing are superbly wrought in *alto-rilievo*, and are celebrated for their beauty and finish. The rotunda, ninety-six feet in diameter and one hundred and eighty feet high, is decorated with panels representing scenes in American history, and over this the dome rises in the center of the Capitol, being the most imposing feature of the huge pile. This uplifts three hundred and seven feet above the base-line of the building. The canopy of the dome is ornamented with frescoes by Brumidi, representing sixty-three distinguished characters in our history, in such proportions as to appear of life-size from the floor beneath. From the balustrade at the base of the canopy the visitor has the finest possible view of Washington and its surroundings. The most interesting rooms of the Capitol are the Old Hall of Representatives, now used as a National Statuary Gallery; the Old Senate-Chamber, now the Supreme Court-room; the Hall of Representatives, the finest legislative chamber in the world; the Senate-Chamber; and the Congressional Library, which contains the largest library in the country, about four hundred thousand volumes. These rooms are richly ornamented with frescoes, wall-paintings, stained glass, carvings, and statuary, and the marble staircases leading to the visitors' galleries are striking architectural features of the Capitol.

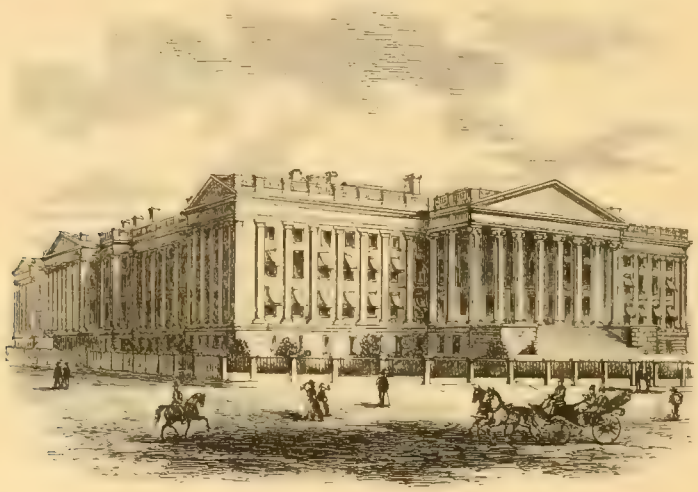
At the opposite end of the city from the Capitol, on Pennsylvania Avenue, are the group of departments surrounding the Presidential mansion, known as the White House, and inclosing with it pleasant little parks and grounds. The Treasury Department is a building in the Ionic style, four hundred and sixty-eight by two hundred and sixty-four feet in size, the east front of which was modeled after the Temple of Minerva at Athens, and on the other side of the White House is the huge and ornate structure devoted to the State, War, and Navy Departments, which is five hundred and sixty-seven by three hundred and forty-two feet on the ground-plan and four stories in height, with a high Mansard-roof.



The White House.

The White House, which is between these buildings, is a spacious mansion built of freestone, one hundred and seventy feet long and eighty-six feet wide. It is of the Ionic style, and painted white, and the grounds, which are finely laid out, include seventy-five acres, twenty acres being inclosed as the President's private grounds, and containing extensive conservatories. Opposite the White House is Lafayette Park, the largest in the city, laid out in winding paths and filled with trees and shrubbery. In this stand Clark Mills's equestrian statues of Washington and Jackson, and around it are grouped elegant residences, occupied by senators, representatives, cabinet ministers, diplomats, and bankers.

Other noble public buildings in Washington are the Patent-Office, constructed of marble, freestone, and granite, and the finest edifice, from the purely architectual stand-point, in Washington; the Post-Office Department, of white marble, in the Corinthian style, immediately opposite the preceding building; the Department of Agri-



Treasury Department.

culture, surrounded by superb conservatories and flower-gardens; and the Smithsonian Institution, a beautiful red-sandstone edifice of great size and height, set in the midst of a charming little park. The latter was endowed by James Smithson, an Englishman, and the illegitimate son of the Duke of Northumberland, who founded it "for the increase and diffusion of knowledge among men." It was begun in 1847 and completed soon afterward; and now contains one of the finest museums of natural history extant, with large collections in metallurgy, mineralogy, and ethnology. Near the Smithsonian and adjoining the Capitol grounds are the Botanical Gardens, consisting of a series of vast conservatories, filled with rare and curious plants, flowers, and fruits.

The Washington Monument, designed to have been the most imposing in the world, is still in an unfinished condition, and is rather a blemish than an ornament to the city, though it is hoped that it will yet be completed according to its original pur-

pose. While speaking of the public institutions of the capital, it will not do to omit some allusion to the "Soldiers' Home" (for disabled soldiers of the regular army), which consists of several spacious marble buildings in the Norman-Gothic style in a beautiful park of five hundred acres. This park occupies an elevated plateau three miles north of the Capitol, and here several of our Presidents have made their summer home, notably Lincoln, whose last days were spent here. Washington has also many striking public buildings, not erected by the General Government, which add much to the beauty and interest of the city.

The most busy and fashionable street of Washington is Pennsylvania Avenue, in that portion of its course between the Capitol and the White House. It has a width of one hundred and sixty feet, and on it are the principal hotels, theatres, shops, etc. Massachusetts, Vermont, and Maryland Avenues are lined with handsome residences, and these, with the squares in the near vicinity of the White House, constitute the aristocratic residence portion of the city. Washington in the winter is the seat of a very brilliant and fascinating social life; for here is gathered much of the intellect, culture, wealth, and beauty of our land during the annual congressional session, to which the large foreign element, representing the most attractive features of the old world social life, adds additional charm. The surroundings of the city are very pleasant. We have already spoken of quaint old Georgetown, which looks like a piece of the eighteenth century set down in the midst of the present. The near scenery of the Potomac River is wild and beautiful. Across the river are Alexandria, another quaint old town; Arlington, once owned by Washington, and at the time of the opening of the late war the property of General Robert E. Lee; and all the embattled heights of the Virginia shore, so full even to-day of associations of the late civil war.



War and Navy Building.

OUR NATURAL RESOURCES.

Extent and diversity of the United States—Its advantages of coast-line, rain-fall, and internal water-ways—The great cereal crops, wheat, corn, etc.—Their annual product and value—Possibilities of the future—The cotton, rice, tobacco, and sugar States—Statistics of production—Our annual fruit-crops—The forests of the country—Present condition of the lumber industry—The enormous possibilities of the Pacific coast in lumber—Coal production in America—Our iron-mines—Coal and iron only in their infant development—The yield of the precious metals—How gold and silver are distributed—Our deposits of copper, lead, quicksilver, and the minor metals—Petroleum-oil and its distribution—Enormous value of our sea-fisheries—Importance of fish-culture—Mackerel, cod, shad, herring, salmon, etc.—The oyster-beds of American waters—Total value of our fisheries—Our resources capable of twenty-fold their present production.

THE United States, exclusive of lakes and river surfaces, contains 3,026,494 square miles, an area divided into political divisions of thirty-eight States, nine Territories, and one District. This vast region supports a population of 50,155,783, and is easily capable of sustaining five times that number of people, without unduly drawing upon its resources. It contains the greatest possible variety of soil and climate, and its inland seas and water-courses are such as to give great facilities for interior commerce, aside from the advantages offered by a widely extended and intricate railway system, which is rapidly increasing. The coast-line of the United States, including indentations of gulfs, bays, and inlets, is 27,700 miles, which is rather more than eight thousand miles longer than the coast-line of Europe. This estimate includes the Atlantic and Pacific sea-coasts, the shore-line of the Great Lakes, and the shore-line of the Mississippi River and its tributaries. This gives our country about one mile of shore-line to one hundred and four miles of surface—more than double the ratio in Europe. The advantage of a sea-coast indented with numerous bays, inlets, and estuaries, is beyond measure. It affords harbors for shipping, and gives the best chance for large international commerce, while long and navigable rivers are essential to internal trade. History proves that the two greatest nations of antiquity grew mainly by their commercial and naval advantages. Greece and Rome never would have achieved their greatness had their coast-lines been less favorable in shape and extent. The action of the same law of civilization is no less noticeable in modern times, and the United States is favored in this natural advantage beyond all other nations.

The first and most important blessings which Nature can bestow on a country are good climate and a fertile soil, for these two, above all other elements, are essential to the health and prosperity of the people. Our country lies entirely within the

temperate zone, though a certain portion of it is practically semi-tropical; and, while its climate is considerably diversified, it may be regarded, on the whole, as very healthful to man, and is suited to an almost endless variety of products. The fertility of the soil in the United States is remarkably great. With the exception of a portion of the mountainous region, nearly all of which is a store-house of coal and the metals, there is very little space not available for grain, grass, cotton, tobacco, sugar, or other valuable crops. So great, too, is the diversity of the country in climate and condition, that a poor yield in one portion is always counterbalanced by a large yield somewhere else. The total returns of the earth to man vary less year by year than elsewhere, so that North America is more and more recognized as the store-house for the food-reserve of the rest of the world. The fertility of the soil is much assisted by the abundant and uniform rain-fall. This will average, year by year, somewhat more than forty inches, while the rain-fall of Europe is only twenty-four inches, as shown by observations for many years past. The blessing of such a rain-fall does not end with its effects on the products of the soil, but it makes the country a land of pure springs and crystal brooks. In the regions along the eastern and western slopes of the Rocky Mountains the rain-fall is lighter than elsewhere, and here irrigation is needed to produce crops, the water being drawn from those inexhaustible reservoirs, the mountain snows. Experience has shown that the alkali soils of such regions as Utah, once considered as sterile and worthless, when stimulated by irrigation can be made to bloom like the rose, and produce the richest return to man's toil.

In taking a brief survey of the natural resources of this country, let us first glance at the products of the soil, which of course surpass all other returns of industry, not only in money value, but in primary importance to the people.

Wheat has been, from time immemorial, the most important cereal of the world, having been known from the earliest times. Indeed, it is a singular fact that some of the best-known varieties of American wheat have originated from seed found in the cerements of Egyptian mummies, proving that it has preserved its vitality for not less than thirty centuries! Though this cereal is largely grown in all the European countries, Russia is the only one which has much to spare for export, so that our own country is now the principal granary for foreign supply. The belt of our wheat-producing region stretches from ocean to ocean. It is narrower on the Atlantic slope, only running far south on the highlands. In the Mississippi Valley it widens both toward the south and to the north, where it stretches much beyond the Canada line; west of the lakes to the forty-ninth parallel; while on the Pacific slope it extends to the very southernmost limits of the United States, and on the north runs far away over the line into British Columbia. The latter country, particularly the valley of the Saskatchewan, it is believed, will become one of the most notable wheat-producing regions of the world.

More than half the area of the United States is included in the wheat-belt, but it is as yet the great valley of the Mississippi which is our main granary. Here can be

seen the golden wheat in fields from ten acres to twenty thousand acres. Still larger fields are sometimes seen on the Pacific slope. Indeed, in some portions of California, Nature has furnished such a climate and soil that by means of irrigation two crops a year of wheat or barley can be raised, and an additional crop of Indian corn, from the same ground. Some of the Western Territories are proving wheat-producing regions of vast importance, Dakota notably so, and the large scale on which this cereal is raised by individual capitalists (for such is the term to use in view of the amount of money invested and the organization of labor) is simply astonishing. It is said that a single wheat-crop grown in Dakota harvested during the last season the product of a hundred thousand acres. The limit of the successful cultivation of this grain is not determined so much by the cold of winter as by the temperature of summer, 57·2° being the lowest mean temperature at which it will mature. Wheat-growing with us has regularly extended westward. In some of the older States the land has become exhausted on account of careless agriculture, and so stocked with the seeds of weeds that it has become necessary to seek new lands. These have been found in the virgin prairies of the far West, where no expense for manures is needed. It is estimated that only about one tenth of the available wheat-lands in the country has been utilized, allowing in this estimate for a proportionate allotment to the other cereals. The wheat-crop of the United States, for the year 1880, amounted to 459,479,505 bushels. The surface sown was nearly 30,000,000 acres, giving an average of a little more than fifteen bushels per acre. The value of the crop was $497,030,142, and the value of the wheat export for the year mentioned $150,575,577.

Even more important than wheat is maize, or Indian corn, the name by which it is better known on this side of the ocean. The area of the corn-region overlaps the wheat-belt far above its southern limit, and extends to the extreme south, where it grows luxuriantly side by side with sugar-cane and cotton. This most valuable cereal finds its use, not merely in supplying man with food, but as the cheapest and best means of fattening cattle and swine for the market, a purpose to which it is exclusively devoted by many extensive growers. The yield of corn in the United States for 1880 was 1,754,861,535 bushels, raised to some extent in every State and nearly every Territory in the Union. The main production was in the Mississippi Valley, through the whole length of which, except in the extreme northern part, it grows abundantly. The money value of the crop was $580,486,217. Indian corn is an American plant, and was not known in the Old World till after the discovery of the New. It was found in cultivation by the aborigines from New England to Chili. Darwin, while traveling in South America, discovered ears of corn, together with eighteen species of recent sea-shells, imbedded in a beach, which had been raised eighty-five feet above the level of the sea; and varieties not now in cultivation in Peru have been found in ancient tombs older than the Incas. It is estimated that maize is eaten by a greater number of human beings than any other grain except rice. It is a highly concentrated food, and is superior even to wheat in its union of all the elements necessary to sustain life. In Central and South America it is the principal food of the common people,

and in the southern and western portions of the United States it furnishes a large portion of the bread-stuff used. The variety of food products derived from corn are many, and probably no cereal contributes in more diverse ways to the necessities and luxuries of man, on the Western hemisphere certainly. As an article of export, except in the transmuted form of beef and pork, corn will never compete with wheat, but for purposes of domestic consumption, among the masses of people, it stands without a rival. It is probable that quite one third of the population of the United States hardly ever eat wheat-bread, while the rest of the people use corn to a considerable extent as well as wheat.

In the northern part of the country extends a belt across the continent where the minor grains, such as oats, buckwheat, barley, and rye, are cultivated to a large extent. The oat-crop of the United States for 1880 was 407,858,999 bushels; while the united product of barley, rye, and buckwheat amounted to 75,762,426 bushels. The value of these grains, roughly estimated, would be about $200,000,000 a year. But next to wheat and corn, among the products of the earth, must be ranked the native and cultivated grasses, in the forms of pasturage and hay. It is scarcely possible to appreciate the value of the nutritious grasses that grow upon the uplands of Texas and stretch northward over the plains between the Mississippi and the Rocky Mountains. Here roam and feed countless herds of cattle, and hence comes the beef-supply of the Union, though large herds are raised also east of the Mississippi. The importance of pasturage, as an element of wealth in the matter of dairy-farming, is also immense. Two products of the dairy, cheese and butter, are annually increasing in amount and becoming valuable articles of export. Statistics show the product to be valued at about $350,000,000 (census of 1880)—one third more in value than the cotton-crop, and only one fifth less than that of corn. Hardly less than this estimate is that of the hay-crop, though, of course, a large portion of the latter must be credited to the value of dairy products. All other countries in the world combined do not produce as much cotton as the United States, for here is found the union of the most favorable conditions of soil and climate, and this superiority holds good in quality as well as quantity. Cotton grows as far north as 40°, but the belt within which its cultivation is most profitable lies between the Gulf of Mexico and the parallel of 36°. The best section of this belt is about one hundred miles either side of the parallel of 32°. Although cotton is a good crop in portions of Tennessee, Arkansas, Missouri, and North Carolina, the distinctive cotton States are South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. The yield per acre varies from 130 pounds on the uplands, to 400 pounds on the rich lowlands. The two leading varieties of this important product grown in the United States are the upland and the sea-island. The former, known as the short staple, is of West Indian origin, and receives its designation to distinguish it from the produce of the islands and low districts by the sea. The sea-island cotton is the finest and most high-priced variety, but its cultivation is confined to limited districts. The cotton-crop of 1879, according to the census of 1880, was 5,746,414 bales, representing a money value of $242,-

140,957. This was an average year, and, as the acreage of cotton remains about the same, it may stand fairly for the annual contribution of the United States to the needs of the world. About four fifths of the cotton product are exported, and the value makes a very important factor in determining exchanges and the balance of trade, a function on which the old South depended so much among the reasons which led it to secession.

The sugar-producing region of the United States comprises Louisiana, Texas, Florida, and portions of South Carolina, Alabama, and Tennessee, but it is in the first two named States that the crop is at its best. In the more northerly parts of this region the sugar-cane is grown mainly for its sirup, as the least touch of frost is apt to injure it too much for the production of good sugar. Many varieties of the cane are used, all of which are propagated by cuttings, instead of planting from the seed. Sorghum, or the Chinese sugar-cane, has been introduced into the States where the climate does not admit of the other varieties of cane, and at one time great hope was entertained of the results; but so far experiments have failed, as it has been found impracticable to crystallize the sugar from the sirup. The bulk of the sugar produced in this country is raised in Louisiana, where the industry is old and thoroughly organized. The product for 1880 was 178,872 hogsheads of sugar and 16,573,273 gallons of molasses. The value of our total sugar exports for the same year, including manufactured sugars, a part of which latter, it may be assumed, was derived from foreign sugars, was $3,339,987. Tobacco, another important product, is raised in nearly every State, except, perhaps, in the extreme northern tier. Those which lead are Kentucky, Virginia, Maryland, North Carolina, Ohio, Pennsylvania, and Connecticut. The Virginia and Connecticut tobaccos are the choicest and highest-priced. The total number of acres planted in 1879 was 631,061; the production, 469,816,203 pounds; the value of the crop, $36,624,357. The rice region of the country is made up of the lowlands lying along the mouths of the rivers and the estuaries of the extreme South, beginning near the northern boundary of South Carolina and extending to the Texas border on the Gulf of Mexico; but it is in South Carolina and Georgia that this product flourishes best. Our average annual crop of rice comes to not far from 110,000,000 pounds, for there is not much variation in the annual statistics of the yield. Some description of this culture will be found in the chapter on "The Lowlands of the South."

The variety and amount of fruit raised in the Union, including those of the temperate and sub-tropical zones, are astonishing. Of the orchard-fruits the apple is by far the most valuable. The productive belt of the apple extends across the entire middle and northern portions of the Union, but in the South is only found on the plateaus and highlands. The hardihood and "keeping" qualities of this fruit enable it to be exported in great quantities to foreign lands, while the many forms in which it can be prepared for food increase its domestic consumption. The money value of the apple-crop is not less than $50,000,000 a year, and next to this ranks the peach-crop, which averages about $38,000,000 a year. Including all the fruits, except the

orange of the South and the small fruits, the total value of the crop is estimated at $138,000,000, a little less than one third the value of the average wheat-crop of the country.

Our forests, though the primitive, uncultivated product of the soil, are of too great importance to be overlooked as an element in national wealth. Maine has extensive woods, from which an immense amount of timber for ship-building, domestic use, and for export, has been derived. This drain has been going on for more than half a century, without materially affecting the supply, though the time will shortly come when the timber in the river forests will have been exhausted. In Maine, as in other portions of the country where lumbering has been carried on for many years, it is probable that the saw-mills will soon have to be erected near the place of cutting, because the rivers will cease to be available for floating down the logs. The foot-hills and the sides of both the White and Green Mountains are clad with extensive and valuable forests, which may be said also of the Catskills and the Adirondacks. All of these sections furnish valuable lumber, though mostly of the hard-wood variety. The Alleghany range, for a hundred miles on the eastern side, and on the western to the edge of the prairie-region, is rich in woodland. The specially valuable portion is the pine country of the Carolinas and Georgia, as this is the source of most of the turpentine and tar of the world, besides furnishing a great quantity of lumber. The forests along the north side of the Gulf are rich in timber, while the fine-grained cedars of Florida are peculiarly desirable for lead-pencils.

But the chief lumber-regions which to-day supply our markets are those of Maine, already mentioned, of Pennsylvania, Wisconsin, Michigan, and Minnesota. Their preference grows out of two causes: the fact that these States are intersected by many rivers, which float down the logs hundreds of miles at a trifling expense of labor; and the no less important consideration that the forests are so largely of the fine-grained, soft white pine which is in demand for the largest variety of uses. Chicago, one of the greatest lumber-markets of the world, consumes 3,000,000,000 feet a year. It is estimated that there are now left standing in the important lumber States of Michigan, Wisconsin, and Minnesota, only about 90,000,000,000 feet. So we see that Chicago alone would exhaust these States in thirty years! This tremendous depletion of our most valuable lumber-regions, a depletion partly owing to wasteful cutting, has at last aroused the attention of many intelligent and thinking men. An association has been formed to agitate the matter, and it is to be hoped that Congress and the Legislatures of the States will be brought to take some action in the matter. The effect of forests in promoting an equable rain-fall, and in otherwise modifying the climate and conditions of agriculture, is of the greatest importance. The continual destruction of trees, without planting new forests and groves in proportion, is becoming a serious danger.

All the other timber-regions of the United States yield to those of the Pacific in their immense extent and the size of the trees. Of the latter, those of Oregon and of Washington Territory are most worthy of attention. Here may be found countless

trees of immense size, which loom up from one hundred to two hundred feet in height, with a proportionate diameter. These forests are the wonder of all who have seen them, and from this store-house will come the supply not only of the Pacific States, but of South America, China, and Japan. Likewise in Alaska is found another great lumber-region covered with dense forests of fine timber—pine, cedar, spruce, hemlock, etc. It is impossible to give the statistics of the yearly lumber-supply of the United States, but it may be safely said that the value is surpassed by no other single product of the soil.

Among the mineral products with which our country is so richly supplied, and the value of which we have as yet only tapped on the surface, coal is by all means the most important. We are told by geologists that coal is not a chemical compound nor a mechanical formation. It is a combination in some sense of both, the production of vegetable masses which once stood where the coal is found. Coal has been called the stored-up energy of the sun through long ages of intense heat: for the conditions under which the carboniferous plants grew must have been great warmth and abundant moisture. We can have but little idea of the marvelous vegetation that then covered the earth. Then there grew flags fourteen inches through, mosses that towered up fifty feet, with thickness in proportion, and ferns which reached the height of sixty feet. The densest forests of our tropics are insignificant by the side of such a growth. The time that it took to form this vegetation into coal may be guessed at, when it is estimated that a seam of coal twenty feet thick would require, to make it a deposit in the form of peat, vegetable matter one hundred and twenty feet thick. To make a single coal-bed three feet thick, Professor Dana estimates it must have taken seven thousand four hundred years. Yet there are some coal-beds sixty feet in thickness. The facts of the world's history which such a statement opens to the mind are almost too big for words. The peat-bogs of the world are only incipient coal-beds. First comes peat; then lignite; then bituminous coal; and then anthracite coal, in this long, slow process of the Nature-factory. Anthracite coal is the final result of the most favorable conditions of heat and pressure.

When we compare the coal-fields of the world, we find an enormous disparity. France has one square mile of coal to every two hundred of territory; Belgium, one to twenty-two square miles of territory; England, one to twenty square miles. In England is found more than half the coal-producing area of Europe, amounting to two thousand square miles. It is stated by Professor Le Conte that in one hundred and ten years the whole available coal-beds of Great Britain will have been exhausted. Already many of them have been carried down several hundred feet into the bowels of the earth, and the difficulty of the working is very great. The ratio of coal-beds for the whole of Europe is one square mile to three hundred and seventy-five. In the United States the coal-fields already discovered make up two hundred thousand square miles, and this aggregate is continually being increased by fresh discoveries. Our ratio is now one square mile of coal-beds to fifteen square miles of territory.

The facility of mining in this country is very great, as, owing to the immense

extent of the beds, it has not been so far necessary to work them deeply. It is estimated that there is enough coal in the mines already opened to supply the needs of the United States, with such increase of population as may be expected, for the next five hundred years. The total product of bituminous coal during 1879–'80 was something over forty-two million tons, and of this amount Pennsylvania yielded more than one third. This State has practically the monopoly of the anthracite production, only Rhode Island and Colorado showing additional anthracite coal-fields and furnishing but a small output. The production of anthracite coal during the last census year (1879–'80) was somewhat over twenty-eight million tons, thus making the entire coal production of the country a little more than seventy-one million tons. Against this must be placed the production of England for the same period, amounting to more than twice the amount of coal, taken from one fiftieth the surface of coal-beds. This shows the desperate energy with which the English coal-mines are worked, the enormous depth to which they are carried, and their approaching exhaustion. It is believed by some mineralogists that the extent of coal-fields in our country, including those which have not been opened but are known to exist, and the lignite or semi-bituminous coal, reaches the astonishing total of nearly seven hundred thousand square miles. Coal is found in eighteen States and three of the Territories. Pennsylvania leads, with a product valued at about fifty-eight million dollars; next in importance is Illinois, producing nearly nine million dollars in value; and then Ohio, nearly eight million dollars.

It is a singular fact, in the economy of nature, that iron and coal are so often found in close vicinage. These two most useful of the products of the subterranean earth are essential to each other, and it is fortunate that they are so frequently placed in conjunction. The great wealth of Pennsylvania is due to the fact that she has such enormous deposits of coal and iron lying almost side by side. Iron has, of all the metals, been the most important in its influence on man. It was not till iron was discovered, and its applications utilized, that the human race began to make rapid advances in civilization; for, by the use of iron only, it was able to forge the weapons and tools that gave it complete mastery over nature.

Iron-ore is found in almost every section of the country—sometimes in small, isolated beds; sometimes in extensive veins amid the rocks in the mountains, between layers of limestone; or in connection with coal-measures. These ores are of far different qualities, as the iron happens to be combined with various foreign substances. In fact, iron occurs in so many different forms, and is so different in chemical combinations, that no theory of formation can cover all the conditions. In some cases the ore is easily obtained, in others the mining is very difficult. So, too, in the process of smelting, some iron-ores are easily reduced while others are very refractory. Iron-ores are designated according to their incidental combinations, as red, black, or yellow oxides, magnetic, specular, hematite, etc. In New England the ore is pretty widely scattered, but is found in limited quantities. It is generally magnetic, and of the finest quality, but the fuel necessary to smelt the ore is not easy of access. In

New York State on Lake Champlain, and in the adjoining Adirondack Mountains, great beds of excellent iron are found, and the ores are smelted by means of charcoal. Remarkable deposits are also found in Orange County, which yield an iron much like the celebrated Dannemora iron of Sweden. New Jersey is rich in magnetic ores, which seem to be practically unlimited in extent, and as they are within easy reach of the Pennsylvania coal-region, and have an abundance of limestone near by, they are deemed very valuable. But Pennsylvania stands pre-eminent above all other States; for her inexhaustible beds of the finest iron exist under the most favorable possible conditions for working. Iron-ore is found in this State almost everywhere, amid the hard rocks in the mountains, in the valleys along their base, and in isolated beds and lumps far away in the great limestone valleys. As we pass along the mountain-range of the Alleghanies toward the south, we find on both slopes—east and west sides—more or less deposits of iron-ore, with the accompaniments of coal and limestone. On the east side is the long valley under its several names—Cumberland, Shenandoah, and Tennessee—extending from the Lehigh to the Chattahoochee; and on the west side is a similar valley stretching from near the New York State line far into West Virginia. The great iron-region of Virginia is in the limestone of the valley between the Blue Ridge and the main range. The deposits, mainly hematite, magnetic, and red oxides, are very extensive, though never very deep. A large belt, stretching northeast and southwest across the State, is also rich in the production of this metal, and contains every variety of ore suitable for making iron and steel. West Virginia is no less rich in coal and iron beds, and here is said to exist the best smelting-coal in the world. Western North Carolina and the Cumberland Mountains of Tennessee do not yield even to Pennsylvania in the character and extent of the iron-beds, though they are as yet comparatively unworked.

The Alleghanies, in connection with their outspurs, stand unrivaled in the world for their immense stores of coal and iron, and also for an abundance of limestone, so indispensable in smelting iron. What a contrast do they present to the Alps, so barren of these all-important minerals! Even comparing the Andes, the Rocky Mountains, and the Sierra Nevadas, so rich in gold and silver, with them, how insignificant in their real value to man do the former seem!

In Missouri are found two very interesting iron deposits, known as Iron Mountain and Pilot Knob. These elevations, of about six hundred feet, cover immense veins of very pure iron-ore, yielding from sixty to seventy per cent of metal. It is believed that one tenth of the bulk of these mountains is pure iron. If we go up to Lake Superior, we find the ore existing under peculiar conditions. Hitherto we have noticed it accompanied by coal and limestone. Neither exists in the Lake Superior region, yet the ore is found in great quantities, and of very rich, pure quality. These ores are not worked much on the spot, but transported south to Chicago, Detroit, Pittsburg, etc., where they are mixed with others, for experience has shown the great value of blending the different qualities of ore in producing special kinds of iron and steel. All through the vast region of the Rocky

Mountains iron is found in detached quantities, but not to any very important extent. Geologists say that the United States possesses more than double the amount of the minerals, coal and iron, contained in all the other portions of the world combined. According to the census of 1880, the total product of the iron-mines of the country in ore was 7,971,406 tons, and the value $23,167,007. The make of pig-iron out of this product was 4,295,414 tons, produced by six hundred and eighty-one blast-furnaces, a gain of eighty-four per cent over the products of 1870. It does not come within the objects of this article to deal specifically with manufactures, but it is well enough to remind the reader that this primary production of pig-iron from the ore takes but a very small fraction of the investment of capital and labor involved in the iron and steel products of the country.

We shall next consider the resources of the United States in the precious metals, gold and silver, which, however great, are of vastly less importance than coal and iron. The Eastern gold-field, belonging to the Alleghany range, includes small portions of North and South Carolina, Georgia, and Virginia. But it is of trifling value as compared with the deposits of the Sierra Nevadas and the Rocky Mountains. The gold-bearing veins of California are parallel to each other and to the Sierra Nevadas, except a few of the smaller ones. The fissures or veins seem to have been produced at the same time when the Sierra Nevadas were pushed up, according to Professor Le Conte. On the western slope of the Sierra Nevada, in California, are gold-mines, principally in the basins of the San Joaquin and Sacramento, while on the eastern slopes are very rich silver-mines. Gold was discovered by Captain Sutter in 1848, and the exciting news soon spread to the rest of the country and to foreign lands. The result was an almost unparalleled rush to the favored region. The placers or diggings were soon exhausted. Then came the permanent organizations of the mining industry as conducted by skill and capital. All along the western slope of the Sierras, through California up to Oregon, and across to the Coast Range, are mining districts not only in the ravines, but often extending to the very mountain-tops.

By far the largest portion of our gold is derived from the auriferous quartz. The latter is found in veins between walls of barren rock. The quartz is crushed in stamp-mills, and the gold extracted by the application of heat and quicksilver. The gold quartz-mines are almost innumerable, and the amount of the metal is only limited by the size of the mountains in which the mines are located. But, as the mines are pushed deeper into the mountains, the expense of mining, of course, is greatly increased, though this, again, is reduced by greater scientific skill in conducting all the processes. Yet the balance of expense and labor, as against production, is such that it costs as much to earn a dollar from gold-bearing quartz as from the ordinary industries of the land. Gold is found also in Oregon and Washington Territory, though the interest is not greatly developed there. East of these gold-fields are those of Idaho Territory, where some of the richest gold deposits of the country are found. Many of these lodes contain both gold and silver. The most

celebrated of the last-named deposits is in War Eagle Mountain, which rises two thousand feet. This is as famous in its way as Iron Mountain, Missouri, for its iron-ore. The lodes here contain about two parts of gold to seven of silver, increasing in width and richness as they extend perpendicularly into the mountain. Colorado has also important mines of gold-bearing quartz, which have succeeded the placer-diggings, once exceedingly rich. Indeed, Leadville, now celebrated for its silver production, was once known as California Gulch, and yielded largely of placer-gold. Other important gold-bearing regions are Nevada and Montana, Dakota, and Wyoming Territories, and this most precious of the metals is also found in Arizona, Utah, and New Mexico. The gold yield of the United States for the year 1880–'81, according to the estimate of the Director of the Mint, was $36,500,000, of which California produced very nearly one half. Recent developments appear to indicate that Arizona and New Mexico are exceedingly rich in gold deposits, and that they are destined to be among the most important sections in the country for auriferous use. It seems to be unquestionable that, great as the gold yield of the United States has been for the last thirty-five years, the future production will be even greater, and remain a permanent industry for many years. The demand for gold and silver, as applied to manifold manufacturing uses, has been greatly increased and promises a still further extension.

The silver-bearing region lies almost universally within the same bounds as the gold country. The States of Nevada and Colorado stand pre-eminent for their great yield. Nevada mines of the greatest value lie on the eastern slope of the Sierra Nevada Mountains and on the western side of the Great Basin. Most of these mines carry a small proportion of gold to their silver. The most celebrated lode of argentiferous or silver-bearing quartz ever found is known as the Comstock. This and other lodes running parallel with it are at or near Virginia City, and they run down into the mountain farther than any one can tell. There are about one hundred companies alone on the Comstock lode, and the workings have been carried down to a great depth. Owing to the excessive heat, the flooding of the waters through the lower levels, and the great expense of getting out the quartz, the yield of late years has been greatly reduced, though the silver-bearing veins are believed to be richer than ever. To ventilate the shafts, pump out the water, and facilitate the getting out of the ore, the "Sutro Tunnel" was made some years ago. This enters the mountains two thousand feet below Virginia City, or the opening of the mines, and three thousand five hundred feet below the top of Mount Davidson. The tunnel is nearly five miles long, with many lateral branches and galleries. Though its effect has not been so far commensurate with its purpose, it is by no means improbable that it may yet carry the Comstock mines back to their original value. The total yield of the Comstock lode has been more than $100,000,000.

The most important recent development in silver-mining is that of Leadville, a mountain town in the western central portion of Colorado. Here the ore occurs for the most part in the form of lead carbonates, and it is very easily mined and smelted,

as well as very rich in its production of silver. Leadville and its vicinity have proved to be great facts in the American mining industry, and the amount of silver already taken out of its hills makes it almost a rival of Virginia City in its palmiest days. The area of the now known gold and silver fields of the United States occupies about one hundred and twenty thousand square miles. This resource of wealth has a most important influence on the commerce and civilization of the world, as the precious metals, of course, furnish the medium of exchange between the nations. Their effect is felt far beyond the limits of our own country. The total production of silver in the United States for 1881 was $42,100,000; that of gold, $36,500,000—making the total $78,600,000. The total production of the world for the year 1875 was, according to a well-known German statistician, $186,402,817. Allowing an increase to the amount of $200,000,000 during the last five years, it will be seen that the United States furnishes the world more than one third of its supply of the precious metals. And as the development of our mines has been, and promises to be, exceedingly rapid, there seems a fair prospect that we shall, before long, far surpass this ratio.

After coal and iron, and gold and silver, the mining of copper and lead is of the most importance. Copper, although found in limited quantities along the eastern slope of the Alleghanies, in a few of the Western Territories, and in Idaho, is principally derived from the wonderful mines of the Lake Superior region of the State of Michigan, known as the Upper Peninsula. Here are found vast masses of almost pure copper, which yield an apparently inexhaustible supply. Isle Royale, in Lake Superior, forty-five miles long, twelve miles wide, and averaging about three hundred feet high, is a mass, it might be said without much exaggeration, of nearly pure metal, and some of the headlands of Michigan, as they project into the lake, are of similar constitution. These mines are very extensively worked, and are sufficient to supply not only the United States, but the world, with copper for a practically indefinite period. The total output of the copper-mines of Lake Superior for the year 1881 was 34,102 tons, the value of which was $13,640,800; and the rest of the copper produced in the country would probably increase this amount to $15,000,000. Lead, also, a very valuable metal in the useful arts, is found in many portions of the United States, often in conjunction with other metals, specially copper and silver. The main deposits are those of the Mississippi Valley. One of these lead-fields occupies an area of four thousand eight hundred square miles, and a goodly portion of three States—Wisconsin, Illinois, and Iowa. Galena, Illinois, is the most important locality of this region, and here alone is sufficient lead to supply the country for an indefinite period. Another important field of lead-mining covers a large portion of Missouri and Arkansas, where there are vast deposits, though lying at a great depth; but the richness of the ore fully compensates for the extra expense of shafts and for freeing the mines of water.

Attention has been called to the curious provision of Nature, according to which coal and limestone, so essential to the smelting of iron, are found in close proximity to the

latter-named metal, specially in the great State of Pennsylvania. So, too, in California, the principal gold-yielding State of the country, we find quicksilver, so indispensable to the treatment of the precious metal, close to the gold-bearing lodes. Quicksilver has such an affinity for gold that it seizes it with the grip of a miser, and only intense heat can free the hold. So this most volatile of the metals is a very important agent in the hands of the gold-smelter. The richest and largest quicksilver or mercury mines in the world are found at New Almaden, California, inside of the Coast Range of hills. The ore is brought up out of the shaft in buckets, and in the primitive state it is known as cinnabar, having the dull-red color of bricks. By the action of intense heat the mercury exudes from the ore in the form of vapor, which is passed into a chamber designed for the purpose, where it is cooled and condensed. The metal then trickles down the side of the chamber, and it is drawn off into a reservoir. Thence it is taken and put in iron flasks, for glass ones would not hold it, and is then ready for the market. The production of quicksilver is quite limited. In addition to the New Almaden mines, there are a few spots in the United States where it is found in limited quantities, and outside of this country it is only discovered in workable amounts in Peru, Spain, and Austria.

The minor metals, such as tin, platinum, zinc, nickel, etc., are only found in a few places, and in limited quantities, but there is one product of the deep bowels of the earth for which the United States is distinguished above all other countries. This is petroleum. The origin of this natural coal-oil is still a mooted question among scientists. Some claim that it is produced wherever bituminous coal has been subjected to high temperature and pressure, just as the same oil is obtained by the distillation of coal. Others say it is the result of a peculiar decomposition of organic substances. Others, again, insist that it is the product of sea-plants under salt-water. Whichever theory may be true, the origin of bitumen and petroleum is clearly connected with that of coal, so far as similarity of general processes is concerned.

There are three classes of oils, the upper, middle, and lower. The first are heavier and thicker, and most valuable, as their volatile elements have escaped through the soil, they being near the surface. The middle oils, found at a depth of from three to six hundred feet, are most abundant. At this depth they exist as naphtha; at a still greater depth, say a thousand feet, they exist as gas. The strata of rocks in which oil deposits exist are horizontal, and in their long, irregular, and sometimes narrow crevices, the oil is found in reservoirs, like pockets, in which ores are often deposited. These reservoirs are often exhausted by the pumps. When the boring-auger strikes the water or the oil first, if they are in connection with gas, the expansion of the latter frequently forces them to the surface. But, if the gas is reached first, the explosion and rush to the surface are often of terrific violence. When this pressure of gas is exhausted, the oil has to be pumped up. The gas, oil, and water are always found arranged according to their specific gravity. The oil is conducted from the tanks, where it is temporarily kept at the place of production, by means of pipe-lines, often hundreds of miles long, to the great storage-reservoirs, in such

cities as Pittsburg, Cleveland, etc. Thence it is shipped to all parts of the world in barrels.

The most productive region so far discovered is in Northwestern Pennsylvania, where immense quantities have been obtained in the vicinity of the Alleghany River and its branches. West Virginia, particularly the Little Kanawha Valley, is also specially rich in oil. It is found in Kentucky, Michigan, Northeastern Ohio, Colorado, California all the way from Los Angeles to Cape Mendocino, and in Oregon. A very rich oil-bearing region, greatly resembling that of Pennsylvania, has lately been found in Canada. Throughout these regions are numerous locations where oil may be found, and wells as rich as any that have ever been worked. Reservoirs immensely copious are continually being opened, and the supply to-day is about twice as great as the demand. But the applications of petroleum in new ways are continually enlarging, and we may hope for the time when the demand will come up to the supply, as copious as the latter appears to be. Our country has practically the monopoly of the oil-supply so far, though rich oil-fields have lately been found in various parts of Europe. Geology tells us that the oil-bearing strata of rocks in the United States cover an area of about two hundred thousand square miles. This would make it probable that we hold in reserve a practically unlimited wealth of petroleum, and that in the future, as in the past, we may expect it to be found when it is needed. Some idea of the enormous production of oil may be had from the amount of the export in 1881 : this was nearly forty-one million dollars. The domestic consumption was even more, and, as the amount yielded far surpasses that used, it is probable that the oil-wells of the country produce upward of one hundred and twenty million dollars annually in value.

In the various minerals and stones used in building and the mechanic arts (otherwise than those already mentioned), such as plumbago, kaolin, slate, granite, marble, asbestus, various kinds of sandstone and marble, etc., the country is amply rich for all its domestic needs, and probably always will be, as the supply is practically unlimited, and is found pretty generally distributed through the various States.

In reviewing the natural resources of our country, we must not overlook the value taken from the sea and the fresh waters. Aside from the uses of our rivers and lakes as affording facilities for travel and freightage, and the small streams, ponds, brooks, etc., as furnishing water for household purposes, the immense benefit of our fresh waters in the form of ice is worth considering. Ice fifty years ago was a luxury, now it is a necessity. Without considering its importance in making water cold and palatable during our hot summers, its utility in the preservation of food is very great. Fish, fruits, and meats can now be transported thousands of miles in perfectly fresh condition, and industries of great value have thus been made by the cheapness and large supply of ice, created by our cold winters. California fruits are put in the New York market in perfect condition ; fish can be brought from the Gulf of Mexico, and dressed beef conveyed to Europe. We read that Lucullus and Apicius had fish from the Eastern waters brought to Italy, at immense expense, to

serve at their great banquets. This luxury is now within the reach of the average man at only a trifling expense. The man of moderate income may serve to his guests —pears and grapes from California; pompano from the Gulf of Mexico; salmon from the Columbia River; and quails, and canvas-back ducks, and turkeys, in midsummer, which have been kept for six months in refrigerating stores. The use of ice in the preservation of fish and meat is so great, and has become such a matter of fact, that it is but little appreciated, except during the seasons when the ice-crop is poor.

But it is as a store-house of food that the waters both salt and fresh are of the most importance. The ocean waters laid under contribution extend from Eastport, Maine, to the mouth of the Rio Grande, and from San Diego Bay, Southern California, to Fuca Straits. The Atlantic waters, and the bays and sounds connected therewith, swarm at all times with fish; while at certain seasons come countless shoals from the depths of the ocean to feed on the banks or shallows, or to run up the rivers for spawning purposes. The Banks of Newfoundland and St. George's Shoals are feeding-grounds for innumerable quantities of codfish, and hither resort great numbers of fishing-smacks. Off the shores of the Northern United States and of Nova Scotia American fishermen capture immense quantities of the staple food-fishes, such as herring, mackerel, and cod. There have been taken in a single year nearly half a million barrels of mackerel, and a much greater catch of cod. In this business there are employed not less than ten thousand men, and a large number of sloops and schooners. In New England especially, fisheries are very extensively carried on. Gloucester, Massachusetts, and then Marblehead, are the leading cities in this branch of industry. Here single firms have not less than half a million dollars invested in the business. Gloucester alone sends out about five hundred vessels to fish for cod, mackerel, and halibut. The product of the New England fisheries some years reaches the sum of twenty million dollars, including in this estimate everything coming out of the sea.

Long Island Sound and the shores of New Jersey, in addition to these fishes, furnish menhaden in such quantities that they are used for manuring the land and for obtaining oil by pressure. Until recently they have not been used as a food-fish, though the flesh is sweet and good, on account of the great number of bones; but a method has been recently devised of extracting the bones by machinery, and they are now put up in oil, like the French and Italian sardines, which they rival in excellence. In the spring months the lower portions of the rivers flowing into the Atlantic, from the Connecticut to the rivers of North Carolina, and the adjacent bays and sounds, swarm with shad. These are eaten in great quantities by the people of adjoining cities, packed in ice for inland transportation, or salted for winter use. The North Carolina coast is also exceedingly prolific in herring, and at the mouth of the Chowan River three hundred thousand are sometimes taken at a single catch. Fish in great variety and abundance, many of them the choicest for epicurean taste, abound in the northern waters of the Gulf of Mexico and in the lower portions of the Mississippi River. Fish commissioners have been appointed by the United States and by the several States, to advance fish-culture, and in addition to these are many private asso-

ciations. The result of this scientific effort has been to vastly increase the supply of certain important fishes. The catch of shad, for example, has been nearly doubled within the last ten years. The indications are that this intelligent study of fish propagation will be of incalculable value to the country.

The fisheries on the Pacific coast are also of enormous value. Puget Sound, sometimes called the Mediterranean of the North Pacific, is stocked with a great variety of the finest fish, salmon, cod, herring, halibut, etc. Just off the Straits of Fuca, the outlet of Puget Sound, is a bank which is a celebrated feeding-ground for halibut. Here this fish is found in great quantities, of the largest size and the finest quality. It is often caught weighing three hundred pounds. So, too, along the entire southern coast of Alaska there are very prolific fisheries of cod, halibut, and herring. All these have begun to be of great use and value for export to Japan and China, whence there is a large demand.

But the most important fishery on the Pacific coast is that of the salmon, the king of fish. The Columbia River, its main branch the Shoshone, and other tributaries, are fed by the mountain snows. Consequently the water is distinguished for its icy coldness and clearness. These qualities constitute a great attraction for the salmon, which come up from the depths of the Pacific, from April to August, in countless multitudes, for the purpose of spawning. Immense fishing and canning establishments have been founded at Astoria and in the vicinity. The fish are caught at night in gill-nets, for the water is so clear that they can see the snare during the day-time, and avoid it by swimming above or below. The meshes of the net are made so large that only the fish of more than fifteen pounds in weight are taken. The salmon-meat is prepared by a peculiar process and hermetically sealed. It is then sent all over the world, England taking the bulk of the supply. It is not unusual to can ten thousand tons a year, and a like quantity is shipped fresh to the Eastern markets or salted. In spite of the vast production, the demand exceeds the supply, and the anticipated product of the fisheries is contracted for before the season begins. The fishermen assert that the number of the salmon entering the Columbia and its tributaries does not diminish, in spite of the enormous catch every season. It is said that the value of the salmon canned at Astoria alone amounts to three million dollars annually. The Yukon River, Alaska, is another favorite place for salmon, and in future time it will probably be but little less important than the Columbia for its fisheries.

Not less valuable than the fisheries already described is the industry engaged in breeding, propagating, and catching shell-fish, specially the oyster. The oyster-culture of the United States is remarkable in its value and extent, and the demand for this luscious bivalve is increasing every year. Many of the bays and estuaries of the Atlantic contain more or less native oysters, but their great center is Chesapeake Bay, where the conditions appear to be peculiarly favorable to them. From this bay great quantities are carried and planted in more northern waters. The oyster when thrown overboard and left to itself, under favorable conditions, easily obtains food, and in due time

becomes large and fat. All the small bays and inlets about New York City, specially Long Island Sound, the New England coast as far north as Boston, and the New Jersey coast, are celebrated for the number and excellence of their oyster-beds. The fishery of oysters along the coast north of the Maryland shore amounts to not less than twenty million dollars in annual value, and that of the Chesapeake Bay and the Virginia waters is probably much greater. It would be safe to estimate the yearly production of oysters in the United States as not less than fifty million dollars, and it probably exceeds that amount. One of the most important industries of Baltimore and Norfolk is canning oysters, and from the former place immense quantities are sent in the shell over the United States and across the ocean to Europe, South America, Australia, etc. The oyster-trade of Baltimore is several times as valuable as the whole wheat product of Maryland. At Fair Haven, Connecticut, is another great oyster-mart, where the bivalve is canned and pickled for home and foreign consumption, to the extent of millions of dollars' worth. Though the yield of oysters is very large, and a good deal of scientific attention has been given to their culture, there is a fear, which appears to be but too well founded, that something further must be done to prevent continued deterioration of the beds, if we expect an oyster-supply at all commensurate with our future needs. The oyster-beds of New England and the Middle States are gradually failing, and those of the Southern coast do not show a much better prospect. Oysters are gathered for the most part by means of dredges, or great iron sweeps. Many of the small oysters in this way are destroyed or buried in the mud. Others are widely separated from the mother-bed, and, while the extent of the beds may be increased, the yield of marketable oysters is greatly diminished. In order that the generative matter of the male and female oyster may come together, it is important that the oysters shall remain in a small, compact bed. If the spawn-bearing oysters are very much decreased in number, or widely separated, the chances of contact and reproduction are slight. To these causes may be added the carelessness of fishermen in throwing over the star-fishes, those deadliest enemies of the oyster, when they are taken up. Ignorance prompts the oysterman to chop the star-fish into pieces and return the fragments to the ocean, not knowing the fact that every part becomes again a complete star. He thus increases the enemies of the oyster many fold. The ravages of the star-fish may be guessed at when it is stated that a heavy northeast storm blowing in a small army of these pests frequently destroys many acres of oyster-beds in a few days. These are a few of the causes which account for an indisputable fact. Careful investigations have been made within a few years, proving that the yield of the oyster-beds is failing, while no great natural beds of oysters are being discovered. The oyster is one of the most prolific of creatures. Each mature fish spawns annually from nine to sixty million eggs! This would appear to indicate enormous possibilities in improving the oyster-yield, yet in spite of this the tendency is in the opposite direction. Professor Mobius, a celebrated authority on this subject, some years ago gave this warning: "In North America the oysters are so fine and cheap that they may be eaten daily by all classes. Hence they are

now, and have been for a long time, a real means of subsistence for the people. This enviable fact is no argument against the injuriousness of a continuous and severe fishery of the beds. . . . But, as the number of consumers increases in America, the price will also surely advance, and then there will arise the desire to fish the beds more closely than hitherto; and if they do not accept in time the unfortunate experience of the oyster-culturists of Europe they will surely find their oyster-beds impoverished for having defied the bioconotic laws." This time has already begun, and it will not be many years before strict protective laws, rigidly enforced, will be needed. There should be no good reason, with proper attention to the subject, why the United States, with its enormous extent of waters favorable for oyster-culture, should not supply the world with this finest of shell fish. Oyster commissions, made up of competent scientific and practical men, similar to those already organized for the protection and propagation of other fish, should have the matter intrusted to them by the national and State governments. The result of neglect and severe fishing is already seen in the great decrease in the lobster-supply, which promises to end, before many years, in practical extinction, unless something is done to check the ravages of ignorant and greedy fishermen. A few years ago the oyster-beds of France were threatened as ours are now, but the prompt action of government has removed the evil, and now the yield is as large as ever.

The whale-fishery interest of this country, since the discovery of petroleum-oil in great quantity, has fallen off vastly, having decreased from the tonnage of 198,000 to to that of about 38,000, but it is still an important industry and is growing again. The whales, which were nearly exterminated, have, owing to a considerable period of comparative immunity, reached again an abundance which justifies the investment of capital in such ventures. The total number of vessels engaged in sea-fishing of all kinds, including the oyster-fishing, reached for the year 1881 the number of fifteen thousand (about); and, estimating a crew of five to each, this would give seventy-five thousand men engaged in the sea-fisheries of our country. It would be fair to add five thousand to represent the fishing interests on the Great Lakes. The total product of American fisheries for the same year, so far as we can estimate from incomplete data, would not fall far short of $150,000,000. This is not given as an exact, only as an approximate estimate.

The process by which the public lands of the United States may be acquired puts them within the reach of all, even the poorest. It is the agricultural interest, after all, which is by far the greatest, surpassing, indeed, all the rest combined. According to the Homestead Law, which went into effect on January 1, 1863, any actual settler twenty-one years of age, male or female, the head of a family, on payment of ten dollars, shall be permitted to "enter" one hundred and sixty acres of land. Also persons of foreign birth may enjoy the same privilege, provided the immigrant has declared his purpose of becoming a citizen of the United States. The same law provides that the homestead shall not in any case be liable for the payment of debts contracted before the issuing of the patent thereof. The settler must be an actual

occupant; that is, live on the farm and cultivate it for five years. On evidence of this fact the Government gives a title in fee for the property; or, if the settler dies, it is secured to his children. By this means, there are none so poor that they can not secure land to cultivate, if they have the necessary thrift, industry, and self-denial to work it.

The design of this chapter has been to deal with the natural resources of the United States merely, and not to touch the vast interests of manufactures and trade. We have seen that the production of what may be called primary industries, though these have only been scratched on the surface, so to speak, is simply enormous, almost beyond grasp. In Europe every resource of nature is worked for all it is worth with the most incessant and ingenious industry. When in course of future time the same exactions are made by man in this country, it is not too much to say that the United States, with all its prodigal variety and richness of natural gifts, is easily capable of yielding from ten to twenty fold more than it does at present. Enough has been said to give some adequate notion of the capacities of production existent in this country, and of the possibilities of the future.

APPENDIX.

STATISTICS OF POPULATION AND AREA.

I.

POPULATION OF ONE HUNDRED OF THE LARGEST CITIES AND TOWNS IN THE UNITED STATES.

CITIES.	STATES.	TOTAL POPULATION.		CITIES.	STATES.	TOTAL POPULATION.	
		1880.	1870.			1880.	1870.
Albany	New York	90,758	69,422	Mobile	Alabama	29,132	32,034
Allegheny	Pennsylvania	78,682	53,180	Nashville	Tennessee	43,350	25,865
Atlanta	Georgia	37,409	21,789	Newark	New Jersey	136,508	105,059
Auburn	New York	21,924	17,225	New Bedford	Massachusetts	26,845	21,320
Augusta	Georgia	21,891	15,389	New Haven	Connecticut	62,882	50,840
Baltimore	Maryland	332,313	267,354	New Orleans	Louisiana	216,090	191,418
Bay City	Michigan	20,693	7,064	Newport	Kentucky	20,433	15,087
Boston	Massachusetts	362,839	250,526	New York	New York	1,206,299	942,292
Bridgeport	Connecticut	27,643	18,969	Norfolk	Virginia	21,966	19,229
Brooklyn	New York	566,663	396,099	Oakland	California	34,555	10,500
Buffalo	New York	155,134	117,714	Omaha	Nebraska	30,518	16,083
Cambridge	Massachusetts	52,669	39,634	Oswego	New York	21,116	20,910
Camden	New Jersey	41,659	20,045	Paterson	New Jersey	51,031	33,579
Charleston	South Carolina	49,984	48,956	Peoria	Illinois	29,259	22,849
Chelsea	Massachusetts	21,782	18,547	Petersburg	Virginia	21,656	18,950
Chicago	Illinois	503,185	298,977	Philadelphia	Pennsylvania	847,170	674,022
Cincinnati	Ohio	255,139	216,239	Pittsburg	Pennsylvania	156,389	86,076
Cleveland	Ohio	160,146	92,829	Portland	Maine	33,810	31,413
Columbus	Ohio	51,647	31,274	Poughkeepsie	New York	20,207	20,080
Covington	Kentucky	29,720	24,505	Providence	Rhode Island	104,857	68,904
Davenport	Iowa	21,831	20,038	Quincy	Illinois	27,268	24,052
Dayton	Ohio	38,678	30,473	Reading	Pennsylvania	43,278	33,930
Denver	Colorado	35,629	4,759	Richmond	Virginia	63,600	51,038
Des Moines	Iowa	22,408	12,035	Rochester	New York	89,366	62,386
Detroit	Michigan	116,340	79,577	Sacramento	California	21,420	16,283
Dubuque	Iowa	22,254	18,434	St. Joseph	Missouri	32,431	19,565
Elizabeth	New Jersey	28,229	20,832	St. Louis	Missouri	350,518	310,864
Elmira	New York	20,541	15,863	St. Paul	Minnesota	41,473	20,030
Erie	Pennsylvania	27,737	19,646	Salem	Massachusetts	27,563	24,117
Evansville	Indiana	29,280	21,830	Salt Lake City	Utah	20,768	12,854
Fall River	Massachusetts	48,961	26,766	San Antonio	Texas	20,550	12,256
Fort Wayne	Indiana	26,880	17,718	San Francisco	California	233,959	149,473
Galveston	Texas	22,248	13,813	Savannah	Georgia	30,709	28,235
Grand Rapids	Michigan	32,016	16,507	Scranton	Pennsylvania	45,850	35,092
Harrisburg	Pennsylvania	30,762	23,104	Somerville	Massachusetts	24,933	14,685
Hartford	Connecticut	42,015	37,180	Springfield	Illinois	19,743	17,364
Hoboken	New Jersey	30,999	20,297	Springfield	Massachusetts	33,340	26,703
Holyoke	Massachusetts	21,915	10,733	Springfield	Ohio	20,730	12,652
Indianapolis	Indiana	75,056	48,244	Syracuse	New York	51,792	43,051
Jersey City	New Jersey	120,722	82,546	Taunton	Massachusetts	21,213	18,629
Kansas City	Missouri	55,785	32,260	Terre Haute	Indiana	26,042	16,103
Lancaster	Pennsylvania	25,769	20,233	Toledo	Ohio	50,137	31,584
Lawrence	Massachusetts	39,151	28,921	Trenton	New Jersey	29,910	22,874
Louisville	Kentucky	123,758	100,753	Troy	New York	56,747	46,465
Lowell	Massachusetts	59,475	40,928	Utica	New York	33,914	28,804
Lynn	Massachusetts	38,274	28,233	Washington	District of Columbia	147,293	109,199
Manchester	New Hampshire	32,630	23,536	Wheeling	West Virginia	30,737	19,280
Memphis	Tennessee	33,592	40,226	Wilkesbarre	Pennsylvania	23,339	10,174
Milwaukee	Wisconsin	115,587	71,440	Wilmington	Delaware	42,478	30,841
Minneapolis	Minnesota	46,887	13,066	Worcester	Massachusetts	58,291	41,105

II.

CENSUS BY STATES AT EACH CENSUS, 1790–1880.*

	STATES AND TERRITORIES	1790.		1800.		1810.		1820.		1880.	
	The United States		3,929,214		5,308,483		7,239,881		9,633,822		12,866,020
	The States		3,929,214		5,294,390		7,215,858		9,600,783		12,820,868
1	Alabama							19	127,901	15	309,527
2	Arkansas							25	14,255	27	30,388
3	California										
4	Colorado										
5	Connecticut	8	237,946	8	251,002	9	261,942	14	275,148	16	297,675
6	Delaware	16	59,096	17	64,273	19	72,674	22	72,749	24	76,748
7	Florida									25	34,730
8	Georgia	13	82,548	12	162,686	11	252,433	11	340,985	10	516,823
9	Illinois					23	12,282	24	55,162	20	157,445
10	Indiana			20	5,641	21	24,520	18	147,178	13	343,031
11	Iowa										
12	Kansas										
13	Kentucky	14	73,677	9	220,955	7	406,511	6	564,135	6	687,917
14	Louisiana					18	76,556	17	152,923	19	215,739
15	Maine	11	96,540	14	151,719	14	228,705	12	298,269	12	399,455
16	Maryland	6	319,728	7	341,548	8	380,546	10	407,350	11	447,040
17	Massachusetts	4	378,787	5	422,845	5	472,040	7	523,159	8	610,408
18	Michigan					24	4,762	26	8,765	26	31,639
19	Minnesota										
20	Mississippi			19	8,850	20	40,352	21	75,448	22	136,621
21	Missouri					22	20,845	23	66,557	21	140,455
22	Nebraska										
23	Nevada										
24	New Hampshire	10	141,885	11	183,858	16	214,460	15	244,022	18	269,328
25	New Jersey	9	184,139	10	211,149	12	245,562	13	277,426	14	320,823
26	New York	5	340,120	3	589,051	2	959,049	1	1,372,111	1	1,918,608
27	North Carolina	3	393,751	4	478,103	4	555,500	4	638,829	5	737,987
28	Ohio			18	45,365	13	230,760	5	581,295	4	937,903
29	Oregon										
30	Pennsylvania	2	434,373	2	602,365	3	810,091	3	1,047,507	2	1,348,233
31	Rhode Island	15	68,825	16	69,122	17	76,931	20	83,015	23	97,199
32	South Carolina	7	249,073	6	345,591	6	415,115	8	502,741	9	581,185
33	Tennessee	17	35,691	15	105,602	10	261,727	9	422,771	7	681,904
34	Texas										
35	Vermont	12	85,425	13	154,465	15	217,895	16	235,966	17	280,652
36	Virginia	1	747,610	1	880,200	1	974,600	2	1,065,116	3	1,211,405
37	West Virginia										
38	Wisconsin										
	The States		3,929,214		5,924,390		7,215,858		9,600,783		12,820,868
1	Arizona										
2	Dakota										
3	District of Columbia			1	14,093	1	24,023	1	33,039	1	39,834
4	Idaho										
5	Montana										
6	New Mexico										
7	Utah										
8	Washington										
9	Wyoming										
	The Territories				14,093		24,023		33,039		39,834
	Total population		3,929,214		5,308,483		7,239,881		9,633,822		12,866,020
					Increase per cent, 1790–1800, 35·10.		Increase per cent, 1801–1810, 36·38		Increase per cent, 1810–1820, 33·06.		Increase per cent, 1820–1830, 32·51.

* The narrow column under each census year shows the order of the States and Territories when arranged according to magnitude of population.

CENSUS BY STATES.—(*Continued.*)

	STATES AND TERRITORIES.	1840.		1850.		1860.		1870.		1880.		Per ct. increase, 1870–1880.
	The United States		17,069,453		23,191,876		31,443,321		38,558,371		50,155,783	30·08
	The States		17,019,641		23,067,262		31,183,744		38,115,641		49,371,340	29·53
1	Alabama	12	590,756	12	771,623	13	964,201	16	996,992	17	1,262,505	26·63
2	Arkansas	25	97,574	26	209,897	25	435,450	26	484,471	25	802,525	65·65
3	California	..	..	29	92,597	26	379,994	24	560,247	24	864,694	54·34
4	Colorado	..	..			35	34,277	38	39,864	35	194,327	387·47
5	Connecticut	20	309,978	21	370,792	24	460,147	25	537,454	23	622,700	15·86
6	Delaware	26	78,085	30	91,532	32	112,216	34	125,015	31	146,608	17·27
7	Florida	27	54,477	31	87,445	31	140,424	33	187,748	37	269,493	43·53
8	Georgia	9	691,392	9	906,185	11	1,057,286	12	1,184,109	13	1,542,180	30·23
9	Illinois	14	476,183	11	851,470	4	1,711,951	4	2,539,891	4	3,077,871	21·18
10	Indiana	10	685,866	7	988,416	6	1,350,428	6	1,680,637	6	1,978,301	17·71
11	Iowa	28	43,112	27	192,214	20	674,913	11	1,194,020	10	1,624,615	36·06
12	Kansas	.	.....		.	33	107,206	29	364,399	21	996,096	173·35
13	Kentucky	6	779,828	8	982,405	9	1,155,684	8	1,321,011	8	1,648,690	22·98
14	Louisiana	19	352,411	18	517,762	17	708,002	21	726,915	22	939,946	29·30
15	Maine	13	501,793	16	583,169	22	628,279	23	626,915	27	648,936	3·51
16	Maryland	15	470,019	17	583,034	19	687,049	20	780,894	23	934,943	19·72
17	Massachusetts	8	737,699	6	994,514	7	1,231,066	7	1,457,351	7	1,783,085	22·35
18	Michigan	23	212,267	20	397,654	16	749,113	13	1,184,059	9	1,636,937	38·24
19	Minnesota	.	...	33	6,077	30	172,023	28	439,706	26	780,773	77·56
20	Mississippi	17	375,651	15	606,526	14	791,305	18	827,922	18	1,131,597	36·67
21	Missouri	16	383,702	13	682,044	8	1,182,012	5	1,721,295	5	2,168,380	25·97
22	Nebraska	.				36	28,841	35	122,993	30	452,402	267·82
23	Nevada	.	.....			37	6,857	37	42,491	38	62,266	46·53
24	New Hampshire	22	284,574	22	317,976	27	326,073	31	318,300	31	346,991	9·01
25	New Jersey	18	373,306	19	489,555	21	672,035	17	906,096	19	131,116	24·83
26	New York	1	2,428,921	1	3,097,394	1	3,880,735	1	4,382,759	1	5,082,871	15·97
27	North Carolina	7	753,419	10	869,039	12	992,622	14	1,071,361	15	1,399,750	30·65
28	Ohio	3	1,519,467	3	1,980,329	3	2,339,511	3	2,665,260	3	3,198,062	19·99
29	Oregon	..	.....	32	13,294	34	52,465	36	90,923	36	174,768	92·21
30	Pennsylvania	2	1,724,033	2	2,311,786	2	2,906,215	2	3,521,951	2	4,282,891	21·60
31	Rhode Island	24	108,830	28	147,545	29	174,620	32	217,353	33	276,531	27·22
32	South Carolina	11	594,398	14	668,507	18	703,708	22	705,606	20	995,577	41·09
33	Tennessee	5	829,210	5	1,002,717	10	1,109,801	9	1,258,520	12	1,542,359	22·55
34	Texas	..	....	25	212,592	23	604,215	19	818,579	11	1,591,749	94·45
35	Vermont	21	291,948	23	314,120	28	315,098	30	330,551	32	332,286	·52
36	Virginia	4	1,239,797	4	1,421,661	5	1,596,318	10	1,225,163	14	1,512,565	23·45
37	West Virginia							27	442,014	29	618,457	39·91
38	Wisconsin	29	30,945	24	305,391	15	775,881	15	1,054,670	16	1,315,497	24·73
	The States		17,019,641		23,067,262		31,183,744		38,115,641		49,371,340	29·53
1	Arizona					..		8	9,658	6	40,440	318·72
2	Dakota					5	4,837	7	14,181	3	135,177	853·22
3	District of Columbia	1	43,712	2	51,687	2	75,080	1	131,700	1	177,624	34·87
4	Idaho							6	14,999	8	32,610	117·41
5	Montana							5	20,595	7	39,159	90·13
6	New Mexico			1	61,547	1	93,516	2	91,874	4	119,565	30·14
7	Utah			3	11,380	3	40,273	3	86,786	2	143,963	65·88
8	Washington					4	11,594	4	23,955	5	75,116	213·57
9	Wyoming							9	9,118	9	20,789	127·99
	The Territories		43,712		124,614		259,577		442,730		784,443	77·18
	Total population		17,069,453		23,191,876		31,443,321		38,558,371		50,155,783	30·08
		Increase per cent, 1830–1840, 33·52		Increase per cent, 1840–1850, 35·83.		Increase per cent, 1850–1860, 35·11		Increase per cent, 1860–1870, 22·65.		Increase per cent, 1870–1880, 30·08.		

III.

STATISTICS OF AREA IN SQUARE MILES.

THERE is not a State or Territory whose area in the census returns of 1880 is not different from that previously given. The total area of the United States, as now revised, is about 800 square miles less than that heretofore fixed. It was given in the census of 1870 at 3,026,494 square miles, exclusive of the 577,390 square miles of Alaska, and it is now found to be 3,025,600. In fourteen States and five Territories the revised area is less than the old ; in the rest it is greater. The difference is very considerable in most cases, and is great in some. The number of square miles in California is reduced from 188,981 to 158,360, in Texas from 274,356 to 265,780, in Tennessee from 45,600 to 42,050, in South Carolina from 34,000 to 30,570, in Pennsylvania from 46,000 to 45,215, in Maine from 35,000 to 33,040, and in New Jersey from 8,320 to 7,815. The area of Massachusetts has been increased from 7,800 to 8,315 square miles, New York from 47,000 to 49,170. Virginia from 38,348 to 42,450, Kentucky from 37,680 to 40,400, Missouri from 65,350 to 69,415, Louisiana from 41,346 to 48,720, Nevada from 104,125 to 110,700, and Wisconsin from 53,924 to 56,040. The census-table of 1880, which does not include Alaska, is as follows, the figures representing square miles :

STATES.	Gross areas.	Total water-surface.	Total land-surface.	STATES.	Gross areas.	Total water-surface.	Total land-surface.
Alabama	52,250	710	51,540	Nebraska	76,855	670	76,185
Arizona	113,020	100	112,920	Nevada	110,700	960	109,740
Arkansas	53,850	805	53,045	New Hampshire	9,305	300	9,005
California	158,360	2,380	155,980	New Jersey	7,815	360	7,455
Colorado	103,925	280	103,645	New Mexico	122,580	120	122,460
Connecticut	4,990	145	4,845	New York	49,170	1,550	47,620
Dakota	149,100	1,400	147,700	North Carolina	52,250	3,670	48,580
Delaware	2,050	90	1,960	Ohio	41,060	300	40,760
District of Columbia	70	10	60	Oregon	96,030	1,470	94,560
Florida	58,680	4,440	54,240	Pennsylvania	45,215	230	44,985
Georgia	59,475	495	58,980	Rhode Island	1,250	165	1,085
Idaho	84,800	510	84,290	South Carolina	30,570	400	30,170
Illinois	56,650	650	56,000	Tennessee	42,050	300	41,750
Indiana	36,350	440	35,910	Texas	265,780	3,490	262,290
Indian Territory	64,690	600	64,090	Utah	84,970	2,780	82,190
Iowa	56,025	550	55,475	Vermont	9,565	430	9,135
Kansas	82,080	380	81,700	Virginia	42,450	2,325	40,125
Kentucky	40,400	400	40,000	Washington Territory	69,180	2,300	66,880
Louisiana	48,720	3,300	45,420	West Virginia	24,780	135	24,645
Maine	33,040	3,145	29,895	Wisconsin	56,040	1,590	54,450
Maryland	12,210	2,350	9,860	Wyoming	97,890	315	97,575
Massachusetts	8,315	275	8,040	Unorganized territory	5,740	.....	5,740
Michigan	58,915	1,485	57,430	Delaware Bay	620	620	.....
Minnesota	83,365	4,160	79,205	Raritan Bay and lower New York Bay	100	100	.....
Mississippi	46,810	470	46,340				
Missouri	69,415	680	68,735				
Montana	146,080	770	145,310	Total	3,025,600	55,600	2,970,000

INDEX OF PLACES,

INCLUSIVE OF CITIES, TOWNS, MOUNTAINS, LAKES, RIVERS, AND OTHER LOCALITIES OF NOTABLE INTEREST.

PAGE

Adirondack Mountains, N. Y. 342–350
Albany, N. Y. 61
Alabama River. 488
Alleghany Mountains. 360–363, 365, 368, 388
Allegrippus, Pa. 362
Altoona, Pa. 362
Ammonoosuc Hills, N. H. 328
Anthony's Nose, Hudson River. 47, 48
Apostles, Isles of the, Lake Superior. 322
Arkansas River. 511
Asheville, N. C. 372
Ashley River, S. C. 480
Astoria, Oregon. 138, 214
Atlantic City, N. J. 260
Ausable Chasm, Adirondacks. 345
Ausable River, Adirondacks. 342, 345
Au Train, Lake Superior. 321
Avalanche Lake, Adirondacks. 342

Bad Lands, Wyoming Territory. 81
Balsam Mountain, N. C. 371, 378, 382
Baltimore, Md. 578–582
Baton Rouge, La. 510
Bear River Valley, Wyoming. 83, 84
Beaufort, S. C. 480
Beaver Bay, Lake Superior. 324
Big Kanawha River, W. Va. 520
Big Sandy River, Ky. 520
Black Hills. 70, 72
Black Mountain, N. C. 371, 372, 376
Blennerhassett's Island, Ohio River. 519, 520
Blue Cañon, Cal. 117
Blue Mountain Range, Oregon. 220
Blue Ridge Mountains. 365, 367, 368, 370–372
Boston, Mass. 565–571
Boulder Cañons, Col. 435, 436
Bozeman, Montana. 152
Brevard, N. C. 380, 381

PAGE

Bridal Veil Fall, Yosemite Valley. 464, 467, 468
Buffalo, N. Y. 296–298

Cairo, Ill. 528
Calaveras Grove, Big Trees of, Cal. 462, 466
California. 105–126
Canandaigua Lake, N. Y. 280, 281
Cap of Liberty, Yosemite, Cal. 472, 473
Cape Ann, Mass. 243, 244
Cape Horn, Cal. 122
Cape Horn, Columbia River. 217
Cape May, N. J. 260
Carter's Lake, Wyoming Ter. 81
Cascade Mountains. 129, 220
Castine, Maine. 232
Cataract Cañon, Colorado River. 12
Cathedral Rock, Yosemite, Cal. 468
Cathedral Spires, Yosemite, Cal. 468
Catskill Mountains, N. Y. 61, 261–265, 350–354
Cauterskill Falls, N. Y. 351, 352
Cayuga Lake, N. Y. 280
Charleston, S. C. 480–482
Chapel Rock, Lake Superior. 320
Chattanooga, Tenn. 389
Cheyenne Cañon, Col. 451–454
Cheyenne, Wyoming Ter. 67, 68, 433
Chicago, Ill. 314, 315
Chicago Lakes, Col. 441
Church Buttes, Wyoming Ter. 81
Cincinnati, Ohio. 522–525
Clear Creek Cañon, Col. 436, 437
Cleveland, Ohio. 300, 301
Clingman's Dome, N. C. 372
Cloud's Rest, Cal. 474, 475
Coast Range, Cal. 136
Cold Spring, N. Y. 54
Colorado. 432–460
Colorado River, The Cañons of the. 3–30

PAGE

Colorado River, The Grand Cañon of the... 3, 5, 16–26
Colorado Springs, Col. 446
Columbia River, The. 126, 138–141, 197, 198, 214–220
Columbia River, Cascades of the. 217
Coney Island, N. Y. 258–260
Connemaugh River, Pa. 362
Cooper River, S. C. 480
Cooperstown, N. Y. 280
Corinne, Utah. 100
Cornwall, N. Y. 59
Corvallis, Oregon. 221, 223
Crawford Notch, N. H. 276, 327
Cro'nest, N. Y. 55
Cumberland Gap, Tenn. 388, 389
Cumberland Mountains, Tenn. 388

Dalles City, Oregon. 217
Davenport, Iowa. 534
Delaware Water-Gap. 354–359
Denver, Col. 434, 435
Des Moines River, The. 533, 534
Desolation Cañon, Green River. 10
Detroit, Mich. 305–307
Devil's Kitchen, Yellowstone Valley. 158
Donner Lake, Cal. 108–111
Dubuque, Iowa. 536
Duluth, Minn. 322
Dunderberg Mountain. 44–47
Durango, Col. 457

Eastern Shore, New England. 225–247
Echo Cañon, Utah. 90–92
El Capitan, Yosemite Valley. 466, 469, 470
Elk Mountain, Wyoming Ter. 73
Enterprise, Fla. 406
Erie City, Pa. 298
Everglades, Fla. 427–431

Firehole River, Yellowstone Valley. 167
Florida. 398–431
Fort Lee, N. Y. 34, 35
Fort Putnam, N. Y. 53
Franconia Mountains. 326, 328–331
French Broad River, N. C. 378, 380

Gallatin River, Montana. 152
Garden of the Gods, Col. 452–454
Georgetown, D. C. 582
Georgetown, Col. 441, 442
Georgian Bay, Lake Huron. 307
Gilbert's Peak, Wyoming Ter. 81
Glacier Point, Yosemite, Cal. 472, 473
Gloucester, Mass. 241, 243
Gosport, N. H. 240
Grand Cañon, The, Colorado River. 16–26
Grandfather Mountain, N. C. 375, 376
Grand Manan, Maine. 227
Grand Portal, Lake Superior. 319

PAGE

Grand River, The, Utah. 4
Great American Cañon, Cal. 118
Great Lakes, The. 295–324
Great Palisade, Lake Superior. 324
Great Salt Lake. 99, 100
Great Smoky Mountains, N. C. 370
Green Mountains, Vt. 336–341
Green River, The. 4, 79
Green River, Cañons of the. 5–12, 79
Green River, Cliffs on the. 78, 79
Green River, Giant's Butte on. 77, 78
Gray's Peak, Col. 433, 444–446

Half Dome, Yosemite, Cal. 474
Harper's Ferry, Va. 365
Hastings, N. Y. 36, 37
Haverstraw, N. Y. 42
Hayden's Cathedral, Wyoming Ter. 81
Hickory Nut Gap, N. C. 371, 372
Hoosac Mountains, Mass. 339
Horseshoe Cañon, Green River. 5
Hot Spring Cone, Yellowstone Valley. 178
Hudson River, The. 31–63
Hudson, The Highlands of the. 43–61
Hudson River, Source of the. 63
Humboldt Mountains, Nev. 209–214
Humboldt, Nevada. 103
Humboldt Palisades. 103, 104

Idaho Springs, Col. 440, 441
Indian Pass, Adirondacks. 345
Indian River, Fla. 424, 425
Inspiration Point, Yosemite Valley. 466
Iowa River, The. 534
Iron Mountain, Lake Superior. 321
Iron Mountain, Mo. 533
Irvington, N. Y. 37
Isles of Shoals, The, N. H. 238–241

Jacksonville, Fla. 399, 400
Juniata River, Pa. 359–362

Kalama, Washington Ter. 126
Kelley's Island, Lake Erie. 293, 294
Keweenaw, Lake Superior. 321
Kennebunkport, Maine. 236
Kenosha, Wis. 316
Keokuk, Ia. 532, 533
Keuka Lake, N. Y. 240
Key West, Fla. 422, 423
King's Mountain, N. C. 373
Kittanning Point, Pa. 362
Kittatinny Mountains. 354
Kittery, Maine. 236

Labyrinth Cañon, Green River. 11
La Crosse, Wis. 538, 539
Lake Champlain, N. Y. 270–272

PAGE

Lake Erie ... 295–305
Lake George, Fla ... 406
Lake George, N. Y. ... 266–269
Lake Huron ... 307, 313
Lake Memphremagog, Vt ... 272–275
Lake Michigan ... 314–318
Lake Okeechobee, Fla ... 427–429
Lake Pepin, Mississippi River ... 542
Lake St. Clair ... 307
Lake Superior ... 318–324
Lake Tahoe, Cal ... 106, 107
Lake Winnepesaukee, N. H ... 275
Laramie City, Wyoming ... 73
Laramie Plains ... 71, 72
Lathrop, Cal ... 462
La Veta Pass, Col ... 455
Leadville, Col ... 454, 455
Liberty-Cap, Yellowstone Valley ... 157
Linville Mountains, N. C ... 374, 375
Little Colorado River ... 14
Lookout Mountain, Tenn ... 389–392
Lodore Cañon, Green River ... 8
Long Branch, N. J ... 260
Long's Peak, Col ... 433, 434
Los Pinos Cañon, Col ... 455
Louisiana ... 491–511
Louisville, Ky ... 526

Mackinac, Straits of ... 307–313
Madera, Cal ... 462
Madison River ... 152
Mammoth Hot Springs, Yellowstone Park ... 154–157
Manitou Springs, Col ... 447–450
Marble Cañon, Colorado River ... 14, 16
Marblehead, Mass ... 241, 244, 245
Marietta, Ohio ... 518
Mariposa Grove, Big Trees of, Cal ... 462–466
Marquette, Lake Superior ... 321
Medicine Bow Mountains ... 72
Merced, Cal ... 462
Merced River, Cal ... 461, 464
Milton, Cal ... 462
Milton Ferry, N. Y ... 60
Milwaukee, Wis ... 316–318
Minnehaha, Falls of ... 545, 546
Minneapolis, Minn ... 547
Mississippi River, The ... 491–514, 528–547
Missouri River, The ... 528
Missouri River, Great Falls of the ... 147
Mobile, Ala ... 488
Monhegan Island, Maine ... 232
Monument Park, Col ... 451, 452
Mount Desert Island, Maine ... 227–232
Mount Adams, N. H ... 326
Mount Adams, Oregon ... 214
Mount Crawford, N. H ... 326
Mount Chocorua, N. H ... 275, 336

PAGE

Mount Davidson, Neb ... 204
Mount Doane, Montana ... 155
Mount Franklin, N. H ... 326
Mount Jefferson, N. H ... 326
Mount Jefferson, Oregon ... 214
Mount Katahdin, Maine ... 326
Mount Kearsarge, N. H ... 275, 332, 334
Mount Lafayette, N. H ... 326
Mount Langford, Montana ... 165
Mount Lincoln, Col ... 433, 459
Mount Madison, N. H ... 326
Mount Mansfield, Vt ... 339–341
Mount Mitchell, N. C ... 373
Mount Monadnock, N. H ... 332
Mount Monroe, N. H ... 276
Mount Pisgah, N. C ... 378, 380
Mount Pleasant, N. H ... 326
Mount Ranier, Washington Ter ... 132
Mount St. Helen's, Oregon ... 214
Mount Stevenson, Montana ... 155
Mount Tahawus, N. Y ... 342, 345–347
Mount Washburn, Montana ... 155
Mount Washington, Montana ... 155
Mount Washington, N. H ... 276–278, 327
Mount Whiteface, N. H ... 275
Mount Whiteface, N. Y ... 342
Munesing Harbor, Lake Superior ... 318
Multonomah Falls, Oregon ... 140
Myakka Lakes, Fla ... 426

Nahant, Mass ... 246, 247
Narragansett Pier, R. I ... 256
Narrow Cañon, Colorado River ... 13
Natchez, Miss ... 510, 511
Natural Parks, The, Col ... 457–460
Nevada ... 102–105, 203–214
Nevada Falls, Yosemite, Cal ... 472, 475
Newburg, N. Y ... 59
Newburyport, Mass ... 241
New Orleans, La ... 495–500
Newport, R. I ... 249–256
New York City ... 548–564
North Dome, Yosemite, Cal ... 474
Nyack, N. Y ... 37
Niagara Falls, N. Y ... 283–288
North Conway, N. H ... 275, 326
North Platte River, Neb ... 68

Oakland, Cal ... 123
Ocklawaha River, Fla ... 401–406
Ogden, Utah Ter ... 95–97
Ogden's Cañon, Utah Ter ... 94
Ohio River, The ... 515–528
Old Stone Face, N. H ... 330
Old York, Maine ... 236
Olympia Mountain, Washington Ter ... 127
Olympia, Washington Ter ... 126

PAGE

Omaha 67
Oneida Lake, N. Y. 280
Ontonagon, Lake Superior 321
Oregon 214–224
Oregon City 137
Oribay, Arizona 28
Otsego Lake, N. Y. 279
Owassa River, Ga. 392–394
Ozark Mountains, Mo. 533

Palatka, Fla. 400
Palisades, The, N. Y. 34–42
Panhandle, The, W. Va. 518
Parkersburg, W. Va. 520
Pascagoula Bay, Miss. 489, 490
Peaks of Otter, Va. 367–369
Peekskill, N. Y. 43
Pelouse Falls, Washington Ter. 141
Pemaquid Point, Maine 232
Philadelphia 572–578
Pictured Rocks, Lake Superior 318
Piermont, N. Y. 37
Pilot Knob, Mo. 533
Pike's Peak, Col. 433, 450, 451
Pittsburg, Pa 516–518
Platte River 76
Point Pleasant, W. Va. 520
Porcupine Mountains, Lake Superior 321
Portland, Maine 234, 235
Portland, Oregon 139, 214
Port Royal, S. C. 478
Portsmouth, N. H. 236, 238
Potomac River 365, 367
Poughkeepsie, N. Y. 60, 61
Prairie Du Chien, Wis. 538
Profile Mountain, N. H. 330
Puget Sound 127, 131, 134, 135
Put-in-Bay, Lake Erie 293, 303, 304
Pyramid Lake, Mo. 208

Raquette River, Adirondacks 342, 349
Racine, Wis. 316
Richfield Springs, N. Y. 280
Roan Mountain, N. C. 372, 375, 376
Rock Island, Ill. 534
Rocky Mountains 67–100, 433–460
Rogue River Falls, Washington Ter. 136, 137
Royal Arches, Yosemite, Cal. 474

Sacramento, Cal. 123
Saguenay River 291–293
Sail Rock, Lake Superior 318
Salem, Mass. 241, 244
Salmon Falls, Columbia River 219
Salt Lake City 89, 98–100
San Francisco, Cal. 123, 124
Sandusky, Ohio 302

PAGE

Sangre de Cristo Mountains, Col. 455
San Juan Island, Washington Ter. 129, 130
San Juan Mountains, Cal. 455
Saranac River, Adirondacks 342
Saratoga, N. Y. 265, 266
Sault Ste.-Marie, Mich. 318
Savannah, Ga. 484–488
Savannah River 484
Sawatch Mountains, Col. 433
Seattle, Washington Ter. 131, 132
Sculptured Cañon, Nev. 212
Seneca Lake, N. Y. 280
Sentinel Dome, Yosemite, Cal. 469
Sentinel Rock, Yosemite, Cal. 468
Shenandoah River, Va. 365, 367
Sherman, Utah 69, 71
Shoshone Falls, Idaho 143–146
Sierra Nevada Mountains .. 105, 106, 112, 113, 119, 203, 205–207
Silver Spring, Fla. 405
Sing Sing, N. Y. 42
Sioux City Falls, Dakota 146
Skaneateles Lake, N. Y. 280
Sleepy Hollow, N. Y. 36, 40
Smoky Mountains, N. C. 386–387
Snoqualmie Falls, Washington Ter. .. 132–134, 142, 143
South Carolina 478–484
South Dome, Yosemite Valley 466
South Mountain, N. Y. 352
Split Mountain Cañon, Green River 10
Spokane Falls, Washington Ter. 141
St. Anthony, Minn. 547
Star Peak, Nev. 209, 210
St. Augustine, Fla. 407–416
Steilacoom, Washington Ter. 129
Stillwater Cañon, Green River 11
St. John's River, Fla. 399, 406, 407
St. Louis River, Wis. 322, 537
St. Louis, Mo. 530–532
St. Paul, Minn. 545
Stockton, Cal. 462
Stony Point, N. Y. 42, 43
Storm King, N. Y. 59
Sugar-Loaf Mountain, N. Y. 49
Summit, Cal. 113
Susquehanna River, Pa. 359
Swampscott, Mass. 246, 247

Tacoma, Washington Ter. 130, 131
Taconic Mountains, Vt. 339
Tallulah Chasm, Ga. 395–397
Tappan Zee, N. Y. 37
Tarrytown, N. Y. 37–40
Tenaya Cañon, Yosemite Valley 464, 476
Tennessee River 392
Thousand Islands, The, St. Lawrence 288–290
Three Brothers, Yosemite, Cal. 470

PAGE

Three Tetons Peaks, Rocky Mountains..... 162
Tocoi, Fla..... 407
Toledo, Ohio..... 305
Toltec Gorge, Col..... 455
Too-lulu-wack Fall, Yosemite, Cal..... 472
Tombigbee River, Ala..... 488
Tower Falls, Yellowstone Valley..... 166
Trempealeau, Mississippi River..... 542
Trenton Falls, N. Y..... 278, 279
Trinity Mountains, Nev..... 213
Troy, N. Y..... 61
Truckee River, Cal..... 106–108, 207, 208
Tuckerman's Ravine, N. H..... 276
Tuolumne Grove, Big Trees of, Cal. 462

Utah Territory..... 86–102
Uintah Mountains..... 80, 81, 91

Vernal Falls, Yosemite, Cal..... 462, 474
Vicksburg, Miss..... 511
Virginia City, Nev..... 106, 108, 204
Virgin Tears Fall, Yosemite, Cal..... 469

Wahsatch Mountains..... 81, 94, 102
Warsaw, Ill..... 533
Washington, D. C..... 582–587
Washington Column, Yosemite, Cal..... 474
Washington Heights, N. Y..... 34
Washington Territory..... 125–143

PAGE

Watkins Glen, N. Y..... 282, 283
Weber Cañon, Utah..... 94
Wells, Maine..... 235, 236
West Point, N. Y..... 49–52
Wheeling, W. Va..... 518
Whirlpool Cañon, Green River..... 8
White Mountains, N. H..... 275–278, 326–337
Willamette Falls, Oregon..... 137, 138
Willamette River, Oregon..... 214, 221, 223
Wind River Mountains..... 76, 162
Wisconsin River, The..... 537
Wright's Cañon, Nev..... 212–214

Yampa Cañon, Green River..... 10
Yaquina Valley and River, Oregon..... 223, 224
Yellowstone Falls, Montana..... 163–166
Yellowstone Lake..... 152, 176–178
Yellowstone Park, Mammoth Hot Springs of. 154–157
Yellowstone River, Grand Cañon of the..... 163
Yellowstone Valley..... 148–178
Yellowstone Valley, Geysers of the..... 167–175
Yellowstone Valley, Mud Springs of the..... 159, 160
Yemassee River, S. C..... 478
Yonkers, N. Y..... 35, 36
Yosemite Falls, Cal..... 470, 474
Yosemite Valley, The..... 461–477
Young's Falls, Oregon..... 138, 139
Yuba River, Cal..... 114

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